

TRAVELLER

SPECIALIST FORCES



SCIENCE FICTION ADVENTURE IN THE FAR FUTURE

TRAVELLER

SPECIALIST FORCES

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T R A V E L L E R INTRODUCTION

Specialist units – or sub-units within a larger force – offer a capability beyond those of ordinary troops. This may be an enhanced version of something relatively commonplace, such as an artillery formation equipped with unusual weaponry, or a capability unavailable to most forces such as the ability to operate underwater or in vacuum. Specialist mercenary units may be hired to carry out a mission only they can complete or augment a larger force by covering its deficiencies. In some cases specialist formations are hired to solve a specific problem, such as preventing an enemy from making good use of superior aerospace power or striking a target that cannot be reached with conventional forces.

Some, but not all, specialist units can be considered 'special forces'. Most provide a useful capability without being very much out of the ordinary, whilst to be considered a special forces formation a unit must be capable of carrying out some kind of special operation – one that ordinary troops could not attempt with any prospect of success. Any formation that offers enhanced or unusual capabilities can be considered a special operations formation, so long as it is militarily useful, whilst those geared towards direct contact with the enemy are more commonly referred to as special forces. In both cases the concept is the same – to bring maximum capability to bear at the *schwerpunkt* or 'point of decision'. The enemy may have vast forces but often a hard blow at just the right spot can degrade their usefulness and allow an inferior opponent to triumph.

Some specialist units may seem unimportant at first glance. Someone with only a limited grasp of strategy may discount the importance of logistics, engineering or skirmisher units and seek to obtain more tanks or suits of battle dress instead. This might actually be the right choice for a commander who lacks the imagination to make use of less obviously powerful units but a skilled strategist can exert subtle pressure on the opposition or maximise the advantage of being better supplied or better informed. It may be that a battle can be won before it begins, due to the enemy's parlous supply situation or inability to obtain clear reconnaissance data.

At some point it is necessary to confront the enemy but in the meantime a skilled commander can harass their supply chain, obtain detailed information on force dispositions, lure small detachments into ambushes,

eliminate key personnel and all the while ensure security of the friendly force. An enemy does not have to be smashed to be defeated; if enough of their strength is nibbled away or nullified they may have to give up the fight. A force that consists only of powerful hammers may be entirely unable to deal with the pinpricks caused by units the hammer-wielder holds in contempt.

Ultimately, this is the nature of specialist formations – they provide an advantage the enemy does not have and may not be able to counter. Specialist units are not a guarantee of victory and usually unable to provide it alone. Attempting to use them as a blunt instrument will still lead to defeat but if wielded with precision and imagination they can alter the strategic situation enormously. This applies whether they are landing from orbit onto the enemy's headquarters, learning the opposing commanders' plans by nefarious and underhand means, or dislocating combat formations by assassinating leaders. In some cases the enemy may never realise exactly what happened; in others it will be terrifyingly obvious. In all cases it will be achieved by maximising advantages and making use of them at the right time in the right place.

Variations on Specialists

A mercenary campaign can be made interesting by focusing on specialists and odd-job personnel rather than straight fighting elements. One possibility is a battlefield-salvage unit attached to a mercenary force. This unit might switch between armoured recovery and combat engineering work, perhaps refurbishing scavenged equipment for sale. A particularly down-at-heel mercenary unit might support itself by scavenging, making the salvage element a critical part of its operation. This can lead to all manner of adventures and escapades on the fringes or in the aftermath of a war. Such a unit might have to fight in self-defence or obtain an important piece of battlefield salvage; they might even hire out as a 'straight' combat unit if the price is right.



SPECIAL OPERATIONS AND SPECIAL FORCES

Terms like 'special forces' and 'special operations' are thrown around rather casually by the media as often as not, largely because it sounds more dramatic than 'elements of the regular army' or 'a fairly typical, if violent, mission for a unit that trains for this sort of thing'. Misuse of these terms inevitably leads to misunderstandings about what is, and what is not, a special operation or a special forces unit. This might not make all that much difference to the casual observer but those whose lives depend on accurate information are much more careful in how they use these terms.

The term 'special forces' is sometimes used to refer to any elite formation but this is not entirely correct. Special forces are trained and equipped to deal with situations that other formations simply cannot tackle with any realistic chance of success or provide capabilities other forces cannot match. There is more to this than raw fighting power – a squad of combat-drugged, battle dress-equipped yahoos has a great deal of that but they are not special forces in any meaningful sense. To qualify for that label a unit must be able to do things that others could not, no matter how big their guns.

There are many kinds of special forces. The most common are small infantry units trained for roles such as hostage rescue, long-range infiltration or sabotage. These units can generally carry out a range of high-end tasks requiring stealth, infiltration, sudden application of ruthless violence and rapid disengagement. Other formations may be more specialised and might be incapable of taking on an equivalent force of conventional infantry.

In general, special forces units maximise their potential by a combination of methods. They may use advanced technology, extremely expensive high-end equipment and other 'bought' advantages, although these would be all but worthless if the special forces formation did not also work at surprising the enemy, keeping them off balance and confused, and using tactics that nullify the enemy's advantages.

The aforementioned band of yahoos in battle dress may be extremely effective at crushing opposition but ultimately they will come up against someone who is ready for them, with weapons that can penetrate their armour and troops willing to stand and fight. A true special forces formation would change its tactics and its approach such that the enemy was still confounded and unable to respond effectively, whereas those who merely rely on overwhelming fighting power will take on opponents optimised for combat against them.

This does not mean special forces units will not make use of battle dress – of course they will, if it offers the right advantages. However, special forces operators are not channelled into thinking like an unstoppable force just because they have good protection and firepower. Special operations are carried out with subtlety, at least most of the time, and when brute force is required it is delivered with great precision. Any mercenary unit can slap the title 'special forces' on its resume but to justify the term a unit has to be able to carry out one or more types of special operation – in other words it has to be able to do something that most soldiers cannot.

ASYMMETRY AND THE POINT OF DECISION

Outside the game of Chess, there is always a degree of asymmetry in any conflict. No two identical forces ever met under perfectly fair conditions. Analysis of likely outcomes that rely on 'all else being equal' are risky, because all else is never equal. Victory goes to the combatant who accumulates the largest number of, and the most decisive, advantages. Thus commanders will try to gain every small advantage they can, be it through better preparation, superior logistics or training, pre-conflict rehearsal of likely scenarios, deception, speed or some other means. This quest for advantage will create a degree of asymmetry even in a conflict between two generally similar forces.

A truly asymmetric conflict is fought between very different types of force. The classic example is the military of a major state opposed to an insurgent movement. The formally organised military will have the obvious advantages – superior technology, better and more equipment and vehicles, greater firepower, more diverse unit types to provide additional capabilities, formal training in each unit's capabilities and at combined arms operations... all the trappings of an expensive military force are available.

Insurgencies can and do defeat major militaries. One way this can be achieved is through the use of mercenaries either to train insurgents or fight alongside them. This is expensive, however, and few insurgencies can afford to hire a sufficient force to defeat a major army in a head-on clash. In this situation the insurgents and the mercenaries have the same problem – how do they defeat an apparently overwhelmingly powerful force?

Mercenary units are rarely large and indeed are often smaller than the smallest units fielded by a major military. They are likely to have more of the obvious advantages than the insurgents – training, equipment, leadership and technology to name but a few – but are still likely to be outnumbered. Good use of mobility can render much of this numerical superiority irrelevant, whilst the accrual of other advantages may allow the mercenary force to be more powerful – or at least effective – than the opponents it faces.

Ultimately, this is how battles are won. It is not about who has the most troops or even the best troops; it is about who can bring the greatest force to bear at the point of decision. This may be a simple question of mobility but often there is more to it than that. Good reconnaissance allows the mercenaries to strike where the enemy is weak or where they cannot easily reinforce, whilst good planning allows the force to achieve its objectives quickly then retire before a significant response materialises.

When mobility is combined with diversions and deception a small force of mercenaries can nullify vastly more powerful formations by pulling them out of position or drawing the target into a place where it cannot quickly receive assistance. The enemy's 1,000-strong tank force is irrelevant if it is still five hours' away from the battle when the force it is moving to assist surrenders.

Enemy forces can be taken out of the equation in other ways. Sabotage or an attack on the supply chain can cripple a unit – at least for a time – without having to fight it head-on. In some cases technology or weaponry available to the mercenaries can create an

'uncountered threat', which prevents the enemy using some of its forces. The threat may be real or imaginary; what matters is that the enemy believes it. It may be necessary to set up a demonstration, for example by shooting down a pair of high-end combat aircraft with the only missiles the mercenaries have. If the enemy gets the message that its planes are easy meat for the mercenaries' aerospace defence weaponry, and they do not know it has been expended, their air force may choose not to intervene in places where it could have made a real difference.

A mercenary force can accrue advantages for itself and its allies in this manner over the course of a campaign, either as a means of moving directly towards its goals or as a facilitator for other operations. An impressive 50-strong bomber wing cannot influence a battle if it has been grounded for lack of fuel and an aircraft carrier that cannot leave port for fear an attack submarine is lurking just offshore is rendered impotent – the mercenaries have taken these powerful pieces off the board without having to fight them.

Forces that are a bit special in some way, even if only by being better at fighting than others, tend to have more interesting deployments than regulars. Whilst everyone else is hunkering down in trenches or being a tiny cog in an enormous offensive, specialists will find themselves sneaking into enemy territory to disable a powerful weapon or conducting a commando raid to secure vital intelligence. These actions can influence the whole course of a military campaign and make specialist mercenaries worth their hiring price – and more.

CREATING A SPECIALIST FORMATION

Specialist formations must be able to fulfil their function, in terms of equipment provided, but this alone does not qualify a unit to be considered a specialist force. Training is necessary or acquisition of personnel with the requisite skillset. Any formation or sub-unit can be declared specialists at the Referee's discretion and it may be interesting to create incompetent specialists that generate adventures and storylines by getting themselves into trouble or failing to assist other units. However, whilst almost any unit can be equipped for a specialist role, those effective in their chosen field of endeavour tend to be well trained both in general terms and in their specialist area.

A specialist force may gain one or more unit capability traits, which are discussed on page 31 of *Running a Mercenary Force*. These represent enhanced effectiveness in the unit's own area of expertise and

can be the result of experience or training – and more commonly a mix of both. The exact traits gained depend on the unit's equipment and focus.

A specialist unit may gain more than one capability trait but they must be related in some manner. For example, a unit could have the Combat Pioneers and Meteoric Assault traits if it is equipped and trained for both roles. This would represent a highly useful formation intended to land from orbit and immediately start clearing the way for other forces to arrive, perhaps by removing obstacles from a landing area to allow troop ships to bring in reinforcements. Such a unit makes sense and would likely give good service in its own niche. On the other hand, Medical Excellence and Close Assault is an unlikely combination and would require, at the very least, some explanation.

Capability traits can be gained one of two ways. If the Travellers present a good plan for training and exercises, highlight relevant experience and make a solid case to the Referee, the trait may be awarded by Referee fiat. The Referee is urged not to be too generous in this circumstance; the Travellers must think and work to gain the advantage. Alternatively, the unit's commanders may declare they are working towards creating a specialist unit or enhancing one. The unit's next CEI increase is traded for the acquisition of the relevant capability trait.

CAPABILITY TRAITS AND NON-SPECIALIST UNITS

Non-specialist units can gain capability traits but this is less common. To qualify, a unit must normally have CEI 8+ and can either work towards a trait or may be assigned one as the result of gaining significant experience in the field. Working towards a trait is handled the same way as for specialist units; the formation can trade its next CEI increase for a trait. Alternatively, the Referee may award the trait if circumstances make it appropriate. For example, a unit that has withstood attacks by enemy armoured forces for weeks on end might be assigned the Tankbuster trait without sacrificing a CEI increase. As always, the Referee should not be too generous here. A mercenary unit will face many traumatic circumstances in its career and should not be able to go around collecting capability traits for each of them.

Low-skilled units can gain capability traits but will come with a characteristic trait attached. A specialist unit with a CEI lower than 6, or a non-specialist unit with a CEI of less than 8, will be assigned a characteristic trait along with the capability trait. This may or may not be negative. For example, a low-skilled infantry formation that gains experience in skirmishing might be

Using Capability Traits

Once a unit has gained a capability trait, it benefits whenever it is relevant. The Referee can interpret traits quite broadly but they do not overlap. Thus a unit with the Can-Opener trait gains its bonus when fighting armoured infantry – which can be interpreted to include anything from heavy flak jackets to battle dress – and also to formulate tactics, train other forces to take on armoured infantry or sabotage a battle dress production facility. It does not confer any advantage to fight against armoured vehicles however; that is covered by the Tankbuster trait.

A capability trait can be used at the abstract or detailed level, or both in the course of the same engagement. At the abstract level the trait is applied as a DM on any CEI or ECEI check involving the specialists in their intended role and applies throughout the mission. If the focus moves to detailed resolution the trait's DM+2 is applied to relevant skill checks by any and all members of the unit. For example a unit of specialist Skirmishers gains DM+2 on Recon checks to spot enemy troops and Stealth checks to break contact with them.

Capability trait bonuses are the product of often intangible factors. How a unit positions its members, how they predict what each other will do or need from their squadmates, which equipment is held ready and what settings are used on it, shorthand phrases that convey all the necessary details of a plan and so forth. Some of the bonus is due to advanced skills but these are represented by the relevant skill levels of the unit's members. Thus if a specialist unit is dispersed it may not gain its trait DM. Application of the DM by lone soldiers or small detachments is at the Referee's discretion. A single member of a Tankbuster unit who has cleverly sneaked into a position to attack an enemy super-tank at its only vulnerable spot would probably qualify for the DM, whereas a few members of a unit that has become intermixed with a low-skilled infantry formation would not.

In short, in order to qualify for its capability trait DM a unit must be carrying out its specialist function and enough of its members must be present – or circumstances must exist – where it can benefit from its capabilities. Trait DMs apply to a unit rather than individual members of one, although the unit can focus its capabilities although one designated member.

assigned the Skirmisher trait but also the Gold-Bricker trait, indicating an unfortunate habit of using its ability to disperse and operate beyond close supervision to avoid mundane tasks. On the other hand, a unit that makes a herculean effort to develop its capabilities as sharpshooters might also be assigned the Honourable Traditions trait if the Referee thinks this is deserved.

Specialists Within Conventional Forces

Brute force and strength of numbers can and do win battles. However the cost is always higher and the risk of defeat greater if a commander over-relies on one unit type. Tanks may be extremely powerful – or may seem that way – but can be vulnerable if caught without support in unfavourable terrain. Likewise, adding more rifles to an infantry force might seem like a good way to increase its fighting power but beyond a certain point the force needs to diversify its capabilities.

At its most basic, diversification is a matter of adding a different and complimentary capability. Instead of adding another rifle section the unit buys a mortar and hires a crew for it, enabling it to bombard enemy positions as well as firing directly at them. A mercenary tank platoon could afford to add another tank but might be better off buying an air defence vehicle and an APC to carry infantry. A combined arms force is almost always more effective than the sum of its parts.

Once a basic combined arms capability has been established the next step is to add a specialist group that provides additional or improved capabilities. An infantry formation might benefit from a few combat pioneers trained to clear obstacles or a sniper team...

or perhaps specialist anti-armour personnel. These specialists are part of a larger force and do not change its basic nature – but if well selected they make it perform better in its primary function.

A sub-unit can be set up in a specialist role just like any other formation. For example, it is entirely possible to create a skirmisher platoon within an infantry company. If at least 20% of a higher formation is composed of a given specialist type, half its capability trait DM may be used by the parent formation at the Referee's discretion. This translates to DM+1 to resolve situations in which a force benefits from its specialists. In theory, it might be possible to create a unit with five sub-elements, all of which are specialists, and claim DMs under a great variety of circumstances. This would be a highly unusual unit, to say the least, difficult to put together and even harder to maintain at peak efficiency. A highly experienced mercenary unit might manage it, which would place them near the top of the desire-to-hire scale.

The usual way in which a formation can benefit from the capability trait of its sub-units is to have one or more specialist sub-units at the next level of organisation down. Thus a battalion with a specialist anti-tank company would benefit but one with only an anti-tank platoon available would not – although the anti-tank platoon would benefit from its own capability trait DM if operating detached or in a situation where it was the key element in an engagement. Alternatively, an infantry battalion might have large numbers of anti-tank specialists scattered throughout the unit, constituting more than 20% of its numbers and benefit from the DM that way. However, a unit of this nature is more likely on the way to becoming a specialist anti-tank battalion in its own right.



COMBAT SPECIALISTS

Some specialists are geared towards direct combat with the enemy, typically representing enhanced rather than unique capabilities. The tactics used by these formations can be employed by non-specialist forces, of course, but usually with less chance of success. Combat specialists are 'problem solvers' for their allies and comrades, providing a solution to a threat that might otherwise force an operation to be abandoned – or creating a threat the enemy dare not face.

ANTI-ARMOUR SPECIALISTS

Armoured vehicles and heavily armoured infantry are largely impervious to infantry weapons, to the point where anti-armour weapons are considered the most important of all by many military theorists. 'If you can't fight tanks, you can't fight' is an adage common in mid-tech warfare that remains valid, in modified form, at all Tech Levels. Once higher Tech Level equipment is available armoured vehicles tend to become lighter but at the same time heavily armoured infantry becomes an increasingly likely threat. 'If you can't breach armour...' is the starfaring equivalent of the old truism and this capability remains critical ever after.

One solution is to give every soldier a one-shot anti-armour weapon such as a rifle grenade or shoulder-fired rocket but this adds to the combat load of troops and may not increase capabilities all that much. Troops must be trained in order to make good use of such weapons and possession is not the same thing as effectiveness. It is generally more effective to train only some members of a unit with such weaponry. Depending on the weapons in use other soldiers may be assigned extra grenades, rockets or disposable weapons to carry for the designated shooter.

Anti-armour specialists fall into two broad categories – 'can-openers' optimised for combat against armoured infantry and 'tankbusters' trained and equipped to fight against vehicles. The latter generally requires heavier weapons, although many lighter vehicles can be tackled by the same weapons used to breach infantry armour. A specialist anti-armour unit will normally have either

the Can-Opener or the Tankbuster traits – it is rare but not unknown for a unit to possess both. In this case armament can be problematic, since weapons intended to hit fast-moving, agile and relatively small armoured personnel targets will often fail to penetrate armoured vehicles, whilst anti-tank weapons are unlikely to be able to respond quickly to an armoured-personnel target.

Some forces end up over-emphasising anti-armour capability. There are those who consider this to be impossible but once a unit's effectiveness against the commonest opponent – infantry – becomes degraded it is necessary to reconsider the provision of anti-armour weapons. These can be subdivided into general types – placed, thrown, launched and direct fire.

Anti-Armour Specialists

To qualify as an anti-armour specialist unit, a formation must meet one or more of the following criteria:

Primary Weapon: The primary weapon of at least 50% of the unit's members must be effective against either armoured infantry or armoured vehicles, or both. Crew-served weapons such as a 'crunch gun' or missile launcher count as the primary weapon for all crewmembers. Very heavy personal weapons such as plasma guns are not specifically anti-armour devices but count as such due to their destructive power.

Light Anti-Armour Weapons: Each member of the unit must have a weapon of at least marginal effectiveness against armoured units. Rifle or thrown grenades, satchel charges, disposable anti-armour rockets and similar weapons all count towards this requirement. The unit's doctrine may be to pass weapons to the soldier best qualified to use them but the number of weapons must equal or exceed the number of members in the unit.



Placed Weapons

Placed anti-armour weapons are usually either mines or improvised explosive devices buried in the ground or positioned to attack a passing vehicle or armoured infantry force from the side. Blast weapons of this sort are often not all that effective beyond a very close range but can strip off antennae, break tracks or disable wheels, and will endanger personnel who are partially exposed through open hatches. Placed weapons must be prepared ahead of time and are typically used as an ambush, although obstacles and mines can be used to slow or channel armoured vehicles into areas where other modes of attack will be more effective.

One option is to create obstacles by toppling buildings or placing crippled vehicles and emplace charges to attack armoured forces moving through the gaps. This is a rather obvious gambit but can work against an enemy who is pushed for time. A more subtle approach might be to make use of a choke point that seems natural, either due to terrain or a knocked-out armoured vehicle from a previous engagement. Some wily enemies might launch an attack to pressurise the armoured force into reacting or retreating, with placed anti-armour weapons positioned to take advantage of the expected movement. Alternatively, if the enemy uses the same route multiple times it may be possible to position a device somewhere that has come to be considered safe.

To be effective, placed weapons need to be undetected. This can be achieved by deception, such as by distracting any observers or appearing to be engaged in some innocuous activity, or by emplacing the weapon when the enemy is not around. A complex deception or distraction is normally carried out using Deception and Leadership. Success in both checks is required. If the deception is badly coordinated, indicated by a failed Leadership check, the placement attempt will be spotted by any alert observer. If the Deception check is failed the weapons will be obvious to the most cursory examination of the area. A successful Leadership check allows the deceptive emplacement to be carried out but has no other benefit. The Effect of the Deception check is used as a negative DM to an enemy's chance to spot the weapon before entering its effective range. Note that the Explosives skill is used to prepare or handle the devices themselves but it is the ability to conceal what is happening that makes them effective.

Thrown Weapons

Thrown weapons may include hand-thrown anti-armour grenades but when used by irregular forces are more commonly improvised devices such as Molotov cocktails or containers of flammable liquid. Satchel charges can be effective when thrown onto the engine deck of a light armoured vehicle but, on the whole, throwing any such weapon at an armoured vehicle is an exercise in desperation. However, armoured vehicles, and to a lesser extent armoured infantry, can be effectively attacked in urban or similarly cluttered terrain by infantry who can get close enough.

Thrown weapons are delivered using the Athletics (dexterity) skill. If the weapon needs to strike at a precise angle, such as a contact-fused shaped-charge hand grenade, Effect 2+ is required. Success with Effect +0 or +1 causes the weapon to strike but its AP score is negated due to a poor angle of contact. Getting close enough to throw the weapon might require a successful Deception or Stealth check or some other gambit to avoid being spotted or recognised as a threat.

Launched Weapons

Launched weapons include rifle grenades, unguided rocket-propelled weapons and guided missiles. Rifle grenades are typically used by relatively low-tech forces with nothing better to hand and may return to service at higher Tech Levels once active guidance becomes available. Rifle grenades are ineffective against any significant armoured vehicle but can be useful against armoured infantry, especially when launched en masse. A direct hit is necessary to cause any real damage.

Unguided light rocket-propelled grenades are the commonest anti-armour weapon for infantry and of marginal effectiveness against heavily armoured vehicles. They are cheap and easy to use, enabling a state to obtain a reasonable anti-armour capability without overburdening its forces or its budget. The main drawback of these weapons, along with most other light anti-armour systems, is their short range.

Guided weapons have a much longer effective range but tend to be heavier. Those that require direct manual guidance can be countered by directing suppressing fire at the general area around the controller. Even if a hit is not obtained the operator may be forced under cover, making a miss almost certain. Mid-tech guided missile systems are typically operated by a small crew and very bulky, making them difficult to integrate within a mobile infantry force. More advanced systems can be operated by a single soldier, although they are normally assigned a two-soldier crew to allow extra missiles to be carried.

Launchers use the Heavy Weapons (portable) skill. Effect 2+ is required for shaped-charge weapons to use their AP score. Otherwise they do normal damage only. Getting into position to ambush an armoured unit from the flank or rear may require creativity and the use of concealing terrain.

Direct Fire

Early direct fire anti-armour weapons are typically rifles or converted machineguns firing armour-piercing ammunition and of little use against any but the most lightly armoured vehicles. However, these weapons make a comeback when armoured infantry appear on the battlefield. Indeed, a mid-tech force equipped with a large proportion of 'crunch guns' as they are often termed can inflict heavy casualties on an armoured infantry force. Lightly armoured vehicles are also significantly threatened. More advanced direct fire weapons include heavy gauss rifles, plasma and fusion guns. The latter are not specifically anti-armour weapons but are powerful enough to take out most armoured vehicles. Many mid-tech and above armies reintroduce the 'anti-tank rifle' for use against armoured infantry,

typically building an anti-armour detachment around one or two anti-armour weapons within a larger contingent of more conventionally armed personnel.

Direct fire weapons deliver their AP effect on any hit. The primary problem with these weapons is that by definition they require line of sight to the enemy and counterfire can come by the same route. The best way to protect such units is to shoot from concealment or a well-protected position, or to 'shoot and scoot' to avoid retaliation. Wise anti-armour gunners have a well-covered exit route from their position, although sometimes it is necessary to open fire from wherever they are and hope for the best.

Anti-Armour Tactics

Specialist anti-armour troops have a few standard tactics to use against armoured targets. Grav tanks are generally beyond their capabilities as they are both heavily armoured and highly mobile. If heavy missiles or tanks of their own are not available, there is little these troops can do but take cover and hope for the best. However, a grav vehicle might be ambushed if it is close to the ground. It is standard doctrine to fly low under most circumstances, as even heavy grav tanks can be shot down by suitably powerful weapons. In this situation the (real or suspected) existence of such weapons may drive grav tanks down among terrain features where they can be ambushed.

Under less desperate circumstances the usual tactic is to draw armoured vehicles into cluttered terrain and attack from the sides or rear. For ground vehicles this can be almost any terrain but grav vehicles are more difficult to ambush. A killing ground can be established between tall buildings, where the mobility of grav vehicles is offset by the need to take obstacles into account. The keys to a good ambush are the ability to attack from close range and a vulnerable quarter. Typically this is the rear of a vehicle, underneath or above. The attack itself can be made directly or with remotely detonated weapons such as a large improvised explosive device. A sophisticated variant of this technique leaves an escape route for the ambushed vehicles or a route for supports to rush to their aid. This draws the enemy onto terrain of the attackers' choosing and permits a second ambush or the use of mines and similar passive weapons to cause further casualties.

Armoured infantry can be dealt with in a similar manner, although battle dress and combat armour lack flat surfaces to throw a satchel charge on and may not be targeted by seeker munitions designed to attack the tops of tanks. The general principles for a lower-tech

force are much the same; create a killing ground and hit the armoured troops with light anti-armour weapons. Some battle dress-equipped forces will do this for their opponents, simply bulling forward against defended positions and relying on their armour. Better trained forces make the same use of cover as non-armoured infantry and are far more difficult to deal with.

A killing ground should ideally be rough enough to restrict and channel enemy movement but not offer much in the way of solid cover. For weapons like rocket propelled grenades, gauss sniper rifles and anti-materiel rifles an elevated position is preferable, ideally in tall buildings overlooking the target area. Rifle grenades and similar short-range weapons are always risky to use against armoured infantry, especially since the armour tends to incorporate sensors that may detect and warn of personnel close enough to use of such weapons. However, this may be the only option.

Similar tactics can be used by vehicles. Missiles capable of crippling a grav tank or heavy tracklayer can be carried on light vehicles and guns capable of penetrating heavy armour do not require a tank as such to mount them. Tank destroyers come in two types; heavily armoured versions with their gun in a limited-traverse mount and light, mobile platforms relying on speed and concealment. It is dangerous to try to use tank destroyers as tanks; their lack of protection or the ability to quickly traverse a turret can be a real liability. However, when shooting from ambush they can be highly effective. Grav tank destroyers can spin rapidly on their axis and do not suffer so badly from the lack of a turret, although they are still less effective in the open than true tanks. An ambush from a concealed position followed by a rapid retreat is the best tactic in most cases, or creating a situation where the enemy must cross a killing ground under fire from dug-in tank destroyers.

Many mercenary units contain an anti-armour element – a tank destroyer is a much smaller investment than a tank – whilst some specialise in the field. The ability of a TL9 mercenary unit to eviscerate a TL7 tracklaying tank regiment is one reason why heavy tracklayers are uncommon on worlds with any interstellar connections. This in turn leads to the deployment of lighter anti-armour weapons by militaries that do not expect to encounter grav or tracked main battle tanks.

When robots are encountered, they are considered equivalent to armoured infantry if they are roughly humanoid sized, or smaller, and therefore subject to the Can-Opener trait. Larger robots are considered equivalent to vehicles and subject to the Tankbuster trait.

Anti-Armour Section (TL7)

Governments with significant offworld contact generally prepare for attack by heavily armoured infantry and light armoured vehicles rather than the heavily protected tracklaying tanks they would expect from a foe of their own Tech Level. Anti-tank capability is still important but the most likely armoured threat is highly mobile and relatively lightly armoured. Some militaries issue thrown or rifle-launched anti-armour grenades in huge numbers and hope for the best, whilst others rely on anti-armour support weapons such as battlefield missile systems, autocannon firing armour-piercing ammunition and the like. However, a relatively cheap anti-armour capability can be obtained with infantry-portable weapons. Whilst incapable of penetrating battle tanks these weapons can cripple light grav combat vehicles and deal with armoured infantry.

This TL7 anti-armour section is based on a traditional three-element system, with two anti-armour squads and a command squad. The latter contains the section leader, armed with a typical infantry soldier's rifle and kit, plus a three-soldier machinegun team. A mix of standard anti-personnel and armour-piercing ammunition is carried, providing marginal performance against light vehicles and armoured infantry. Thus in this four-soldier fire team three of the members are considered crew for the machinegun and although its performance is marginal against armour this is sufficient for 75% of the squad to be anti-armour capable.

The section's two anti-armour squads are organised around a gunner and spotter operating a heavy anti-materiel rifle. This would be an effective sniping weapon but the gunners are trained to engage armoured targets at moderate ranges rather than picking off individuals at great distances. Ammunition is a mix of armour-piercing and ball, possibly with some explosive or incendiary rounds if the need is perceived. One of the remaining two infantry soldiers is equipped with a rocket-propelled grenade launcher whilst the other is armed for conventional infantry combat. Although the anti-materiel rifles can be operated by one soldier they are crewed by two and with an RPG-equipped soldier also in the four-man squad, this is 75% anti-armour capability. The section overall more than qualifies as an anti-armour specialist unit – in terms of equipment at least. Training levels can vary considerably but the unit has at least the potential to successfully engage armoured targets.

This section is best suited to defensive operations against an enemy equipped with light vehicles or combat armour. It is not as effective against infantry as a conventional formation would be and is typically part of an otherwise standard infantry platoon or attached to one as support. Cynical observers have noted that infantry anti-armour units lack the ability to quickly disengage so must fight on longer and more desperately than a formation that can move away from the threat. Whether or not this is a consideration for commanders, it is a reality of fielding such forces but for mid-tech societies there may be no other effective counter to armoured troops.

CLOSE ASSAULT SPECIALISTS

Close assault specialists are trained and equipped to lead an assault on a defended position or to fight in cluttered terrain such as orbital installations or cities. This may be on quite a large scale – many militaries maintain urban-combat battalions trained for close-quarters fighting – or the unit may be a small one specialising in more closely targeted operations. Close assault work is the province of hostage-rescue and asset-seizure units, which specialise in eliminating all opposition in a small area within the shortest possible time.

Close assault work is all about speed, aggression and firepower as well as the ability to get past obstacles that might slow down an operation and cause it to fail. Weaponry is optimised for short-range combat and the ability to put a target down quickly. This typically means light automatic weapons or possibly combat shotguns, both of which trade penetration and range for stopping power. Grenades, breaching charges, distraction devices and some means of getting past locked doors are essential equipment for most units. Lower-tech doors can be 'opened' by using small charges or shotguns but for higher-tech targets it may be necessary to deploy more advanced breaching equipment or have the capacity to hack electronic locks.

Most tactics used by close assault formations are the same as any other force; fire and manoeuvre, use of cover and so forth. However, close assault units are often limited by the weaponry they have available; if caught at medium to long range they are at a major disadvantage against conventionally armed forces. Thus the approach phase of an operation is of great importance, requiring either a stealthy ingress or one covered by the fire of other troops. Higher-tech forces have the option to debus from grav vehicles directly onto the target or descend from orbit using meteoric assault techniques. Once the unit is in proximity to the enemy



a vicious close-quarters fight is almost inevitable. Close Assault techniques are not really compatible with the Skirmisher trait as they are almost the polar opposite – skirmishers want to avoid a decisive result, close assault units want to force one at the risk of high casualties.

Breach and Clear

Hostage-rescue and similar units use a variant on the usual close assault technique based on a sudden assault into a small area, usually from multiple entry points. Wherever possible the attack is accompanied by distraction devices and at least part of the force entering from an unexpected direction. Snipers and other supporting forces may assist by eliminating guards or keeping defenders away from heavy weapons.

The key to a successful breach is surprise or at least suddenness combined with distractions. Ideally, the close assault unit will arrive at the entry points undetected and catch at least some of the defenders unprepared. This requires stealth, or perhaps distraction, and is not part of the close assault mission as such. That is, a unit with the Close Assault trait cannot claim the DM to their chances of sneaking into position from it. To gain that they would need to also have the Stealthy trait.

In an ideal situation the close assault unit will be in position, undetected and ready to enter the target area simultaneously upon command. If they are detected during their approach it may be possible to prevent the alarm from being raised. Supporting snipers with suppressed weapons or team members with some means of silently disabling guards may be able to do this. If not, the only choice to be made is whether to 'go loud' and launch the attack from wherever the team happens to be or to withdraw.

If the assault force has to go loud early, what happens thereafter is a standard close assault, perhaps complicated by the presence of high value targets or

hostages. Success can be achieved by good tactics and the vigorous application of firepower. However, if the assault team can get into position and attack on their own terms they have an additional option. This is referred to as 'breach and clear', although the range of possible applications is wider than simply entering buildings. Any close-range attack on totally unsuspecting enemies might be treated the same way, for example if the assault team approach in civilian clothes then open fire with concealed weapons.

A breach and clear operation is a coordinated strike made on an unprepared enemy. A guard nervously looking out of a window may still be considered unprepared if an assault team bursts through the wall behind them. The shock of the assault and any preparation in the form of explosives, distraction devices and so forth will rob the defenders of some actions, essentially allowing the attackers to operate freely for a few seconds – which may be all they need.

When a breach and clear is triggered, roll 2D on the Breach Effects table, with the following modifiers.

Unit leader: +Tactics skill
Close Assault DM if unit has the trait: +2
Breach made by explosive means such as frame charges or an improvised demolition charge: +2
Defenders are alerted and expecting an assault: -2
Defenders have correctly predicted the entry points and are ready to defend them: -4

Anyone within the breach area must make an END check at the difficulty level indicated by the result on the Breach Effects table. A negative Effect on this check indicates the number of Minor Actions the victim loses. It requires one Minor Action to ready or draw a weapon and two (equating to a Significant Action) to make an attack. Thus the actions of the defenders are limited by the amount of actions they lose. Consult the Lost Actions table for a summary of these limitations.

Breach Effects

2D+ Modifiers	Difficulty of Check	Result for Attackers
15 or more	Formidable (14+)	Breach highly successful.
12–14	Very Difficult (12+)	Breach highly successful.
9–11	Difficult (10+)	Breach successful.
6–8	Average (8+)	Breach successful.
3–5	Routine (6+)	Breach fails to achieve surprise. Both sides begin fighting on an equal footing.
1–2	Easy (4+)	Breach fails to achieve surprise. Attackers must make a Routine (6+) DEX check or lose a number of Minor Actions equal to negative Effect.
0 or less	Simple (2+)	Breach catastrophically fails to achieve surprise. Attackers must make Difficult (10+) DEX check or lose a number of Minor Actions equal to negative Effect.

Lost Actions

Lost Actions (Negative Effect)	Result
0	May act normally, subject to Quickdraw or initiative.
1	May fire an already readied weapon with an initiative or Quickdraw penalty of -6. May take two Minor Actions this round.
2	May ready a weapon or make one other Minor Action this round.
3	May not act this round. May act normally next round subject to initiative or Quickdraw.
4+	May not act this round. Reduce number of lost actions by 3 and apply that result next round.

It is possible for a breach to cause some defenders and attackers to flinch or freeze, or for an attacker to rush in only to find a defender already firing into the opening breach. Most commonly a breach will cause some defenders to be unable to act for a few seconds, which may be just enough. If distraction grenades or similar munitions are used in the breach, these take effect in the first round if delivered with the attackers' first combat action but can be timed to detonate at the same moment the breach is made. In this case, their effect on the defenders is determined separately from the actual breach and the most serious result applied. A Traveller who has lost one or two Minor Actions may dodge or dive for cover; someone who has lost three or more cannot act coherently in this round. In this situation, reactions such as diving for cover or dodging can be assumed to have Quickdraw 0, with DM-4 to initiative or DM-4 to Quickdraw for every action the Traveller has lost. If a breacher fires before the defender can act, they gain no benefit from the attempt to dodge or dive into cover.

A breach and clear operation can be used whenever a unit makes an organised entry into a defended area such as a building or hijacked starship, providing entry can be made more or less instantaneously. If it is necessary to spend time cutting through hatches the defenders are unlikely to be surprised, though it may still be possible. For example, the breachers might cut an entry then hunker down for an extended period before making their entry in a flurry of distraction grenades and rapidly applied firepower. Such an assault relies on suddenness rather than surprise but can still gain that all-important few seconds as stunned defenders grab for their weapons or flinch from shock.

Close Assault Vehicle Units

A vehicle-equipped unit can be set up for close combat. To qualify, the force needs to be armed with weaponry suitable for a fluid, short-range scramble. This can be anti-personnel weaponry, anti-tank or a mix of both. Typically this means relatively light weapons but the key factor is the ability to get on target quickly.

Close Assault Specialists

To qualify as close assault specialist unit, a formation must meet one or more of the following criteria:

Primary Weapon: The primary weapon of at least 50% of the unit's members must be suitable for close-quarters combat. This usually means submachineguns, combat shotguns and the like but short, light assault rifles or the equivalent energy weapons are also suitable. Hand weapons and/or pistols and grenades are another option. For vehicles, weaponry must be such that the vehicle is capable of all-round fire and responding to a fluid situation.

Mobility: The unit should be capable of rapid movement and changes of formation or position. This is not always necessary – a siege tank with weapons pointed in every conceivable direction could still undertake a form of close assault – but most units will be highly mobile, which usually translates to lightly armoured.

This requires rapid-slewing turret mounts or multiple weapons facing in different directions – although the latter is inefficient and rarely used other than with light self-defence armament. Missiles and weapons mounted in such a way that the whole vehicle needs to be realigned to track a fast-moving target are not suitable for close assault work.

A typical vehicular close assault formation might be optimised either for ambushing heavy armoured vehicles in close terrain or punching into infantry positions to deliver withering firepower from short range. A force of lightly armoured grav vehicles equipped with plasma guns is quite capable of ripping through a TL7 armoured force in short order, quite possibly with minimal damage. Such a force is actually safer at close quarters as the enemy's tank guns will not be able to come to bear quickly enough to engage such fleeting targets. Likewise an anti-infantry unit can be in enemy positions before defenders can

react, pouring firepower into the enemy force at a range where most of its heavy weapons cannot bear and its fortifications may be of little use.

Hostage Rescue Team (TL10)

This small unit is composed of two elements. The command and support element does not have the Close Assault trait. It consists of the unit's leader, a communications and electronic warfare expert, a surveillance drone operator and a driver for the innocuous-looking grav van that carries most of the team's equipment. A two-soldier sniper team is also attached to the command unit but operates independently in the field. Sniper and spotter are equipped with grav belts, which are used to get into position and, if absolutely necessary, to allow a shot from an elevated position even if no natural or artificial high point is available. Since this element of the force does not directly take part in offensive operations its lack of suitability for the close assault role is irrelevant.

The breacher element consists of three three-soldier teams. First team has two soldiers equipped for extreme close-quarters work, with rapid-fire assault rifles or submachineguns and one with a magazine-fed light grenade launcher and a light personal defence weapon for use once explosives or distraction rounds are delivered. Second team consists of an explosive-entry expert armed with an automatic shotgun and two soldiers with assault rifles or submachineguns. Third team is equipped with grav belts and a mix of submachineguns and assault rifles. Armament is tailored to short-range combat in a confined space, enabling the entry team to qualify as a Close Assault formation.

The preferred mode of operation is for third team to 'go high' and enter from above the target area, with first team making the hard frontal entry and second team blasting a secondary entry point. There are infinite variations on this basic setup, of course, and any plan will be based on information gained using drones or electronic intrusion before the operation begins. Sniper support is available and in some cases one or two members of the support unit will be deployed as security or backup for the entry team.

The unit is also effective in building-to-building fighting, sometimes known as 'rattenkreig' or 'rat war' among those familiar with it. Explosives and hand tools are used to break through interior walls, enabling the force's personnel to avoid exposing themselves to sniper fire in open streets and grav belts can be used to cross between buildings at an unexpected location. In an action of this sort the support element normally acts as an anchor and pivot for the close combat element, securing gains made and ensuring the close assault troops have a clear route to retire if necessary.

COMMANDOS

Commando units specialise in highly destructive raiding rather than trying to take and hold territory. Commando units can be battalion-sized or even larger but the forces that carry out any given operation tend to be much smaller. It is rare that a commando force will operate in more than company strength – although other companies might be making their own attacks in the same general vicinity. Commando units are often used as the spearhead of an assault, in which case they are tasked with taking objectives quickly and holding them long enough for conventional reinforcements to arrive. There is some overlap here with close assault formations but commandos use a variety of methods and in general are more sneaky than a close assault force. Their equipment will be tailored to the task at hand, and probably include close-combat weaponry, but there is no reason why it would be prevalent.





Commando personnel must possess a high level of skill in small-unit combat and in addition Stealth and Recon will be a requirement. Individuals within a formation will be trained to handle explosives, operate common machinery and hack computer systems. Some commando units are trained for meteoric assault operations, in which case members will also need Vacc Suit. Overall, a commando unit's personnel will have a level of 2+ in their primary combat skill, such as Gun Combat or Heavy Weapons and at least one supporting skill at level 2+.

Commando missions are typically short and violent, with an objective to destroy something or retrieve it for the intelligence people to look over. One variant on the standard commando model is the 'intelligence commando' unit, whose task is to operate just behind – and sometimes in front of – advancing friendly forces to secure intelligence sources. Some soldiers will burn enemy papers and those with different priorities may destroy potentially important intelligence sources. Intelligence commandos might also be sent into a liberated or captured city to seize anything of value to analysts or they may be tasked with snatching a particular enemy officer during an engagement.

All commando operations are conducted with an eye to maximising value for the personnel committed. This may be seizing intelligence sources or simply causing as much destruction as possible but commandos need

Commando Specialists

To qualify as a specialist commando unit, a formation must meet the following criteria:

Skills: Unit members must possess at least skill level 2 in a combat skill and a relevant non-combat skill such as Medic, Explosives, Stealth, Recon or Electronics.

Equipment and Organisation: A commando unit must be equipped and organised for rapid, destructive raids using a stealthy approach followed by an aggressive assault onto the objective. Commando units must be infantry or armoured infantry but may possess supporting vehicles.

to know what is valuable and what is not. A force can only carry so much in the way of explosives but a well-trained commando unit will use what they have to cause secondary destruction. Derailing a train or damaging the tracks might impede the enemy's logistics capability but derailing a fast-moving train as it crosses an important bridge may cause additional damage. Blowing up the enemy's tanks will deprive them of their use but it may be more effective to destroy fuel and ammunition, or the maintenance facilities. Commandos are not merely skilled; they are also inventive.

Intelligence Gathered

2D + Modifiers	Result
0 or less	Nothing useful learned.
1–2	Trivial information of little use except as part of a much bigger intelligence picture.
3–4	Minor information of local use, valid for 2D days.
5–6	Minor information of local use, valid for 3D days.
7–8	Locally useful information affecting operations up to company level, valid for 1D weeks.
9–10	Locally important information affecting operations up to battalion level, valid for 2D weeks.
11–12	Important information affecting operations up to brigade level, valid for 3D weeks.
13–14	High-level information, affecting operations up to divisional level, valid for 4D weeks.
15 or more	Strategic level information of great importance, valid for 2D months.

Intelligence Raids

An intelligence raid can be undertaken by any force, although some are less well suited than others and, commando formations are best of all. An intelligence raid can be undertaken alongside a conventional operation but the intelligence commando force must be dedicated to this purpose. That does not mean they cannot fight if they encounter opposition but a force undertaking an intelligence raid cannot also conduct sabotage or hold-until-relieved operations to facilitate the arrival of conventional forces. Often, the intelligence commando force is part of a larger operation, with other troops carrying out their own missions against the same target.

An intelligence raid typically yields a quantity of information commensurate with its value. An enemy patrol can be bushwhacked easily enough and this will allow samples of equipment, maps, data storage devices and possibly some prisoners but a patrol is not likely to be in possession of high-level data. On the other hand, a battalion headquarters may well have some juicy information and a brigade or divisional command post certainly will. An intelligence coup capable of altering the strategic balance is only possible if very difficult targets are hit such as a general's entourage or a records repository.

When an intelligence raid is carried out, the Travellers will obtain data of a level determined by rolling 2D on the Intelligence Gathered table. The unit's commando trait DM applies here, if it has one. The raw data must then be sifted and analysed, which constitutes an Intelligence Event (see page 36 of *Mercenaries in the Far Future*). Any advantages gained apply at the level indicated on the table and trickle down to operations within that strategic level. For example, if the Travellers somehow manage to obtain the enemy navy's pay and mobilisation records for the past three decades, this is

strategic level data and any positive DM resulting from the Intelligence Event applies throughout operations based upon this data until it ceases to be valid.

Minimal Value Target (enemy sentry or small patrol): -6
 Extremely Low Value Target (platoon, junior officer): -4
 Low Value Target (company, company-grade officer): -2
 Moderate Value Target (battalion, colonel): +0
 High Value Target (brigade command post, brigade command officer) +2
 Very High Value Target (divisional command post, divisional command officer) +4
 Strategic Target (army command post, major base, specialist installation) +6

Typically information will be of a mundane but potentially useful sort, such as finding out that a unit is resupplied on a regular 10-day cycle, or that a forward position has been reinforced with additional anti-armour and anti-personnel weapons. This in turn allows better planning or avoidance of threats, which will be of assistance to units in the local area. Higher-level information may be of the same sort, such as finding out that a tank brigade has recently moved out of the area to refit. However, sometimes high-level or strategic information may be of wider importance or reveal an opportunity. This might include the location of a highly secret weapons research plant or the weak spot in an enemy fortress.

Once the information is obtained, it must be analysed as an Intelligence Event. It is possible to bring back strategically important information only to see it ignored by analysts or the high command, or for it to be wildly misinterpreted. The intelligence commandos can only do so much; they are combat troops, not planners or intelligence experts.

Raider Platoon (TL9)

Specialising in small-scale raids and 'pinches' of important items or personnel, this unit is also skilled at eliminating enemy leaders – in particular insurgents who think they are safe among a friendly population. The force follows the basic organisational model of an infantry platoon, with some variation. The unit's headquarters section contains liaison and intelligence officers, who assist the commander in fitting into the client's force structure or ensuring a solid level of support. The HQ section is not 'non-combatant' as such but rarely engages the enemy.

First section contains a grav APC fitted with fire support weapons and an armoured air/raft used for close support and emergency pickup of injured or stranded personnel. This section has six personnel, all gunners or vehicle crewmembers who are not commandos as such but are experienced at supporting those who are.

Second and third sections are both subdivided into four-soldier teams. Each has a support gunner, an explosives expert and other specialists to create a broad spectrum of mayhem-causing possibilities. All personnel in these two sections are commando-trained and experienced at small-unit raiding as well as sabotage and infiltration techniques. Weaponry is of the individual's preference, with most personnel favouring advanced combat rifles or the carbine and support variants of these weapons.

SKIRMISHERS

A skirmisher unit is in many ways the opposite of a close assault formation. Skirmishers are trained to break contact when necessary, engaging on their own terms and withdrawing in the face of heavy opposition. By definition, they rarely produce a decisive result but can wear down an enemy or distract the opposing commanders from events developing elsewhere. Skirmishers can also deny an area to the enemy by imposing casualties every time hostile forces try to operate there or move through. This in turn can lead to a lack of clear reconnaissance data, whilst the skirmisher force is able to obtain information in the course of its operations.

To qualify for Skirmisher status a unit must possess superior mobility to a typical unit of its type. This does not rule out battle dress-equipped formations acting as skirmishers, which may well be a valid tactic against an enemy superior in numbers or firepower. As a rule, however, skirmisher units employ light vehicles at most and are often composed of infantry with good fieldcraft skills who can vanish into the countryside or urban terrain. Skirmisher status is highly compatible with reconnaissance work or sniping, whether with rifles or



Skirmisher Specialists

To qualify as skirmisher specialist unit, a formation must meet one or more of the following criteria:

Mobility: The unit should be faster in at least some kinds of terrain than the typical formation of its type. Thus foot-mobile skirmishers must be more agile than typical infantry, vehicle-mounted troops must be able to outrun heavy combat vehicles and so forth. This typically translates to light equipment and armour.

Stealth: The unit should be capable of hiding from its enemies or using terrain to conceal its movements. Any force can attempt this but to qualify as skirmishers the unit must possess above-average skills in this field.

long-range anti-tank weapons. An armoured advance can be held up for long periods by a sneaky anti-armour unit picking off the odd tank then falling back so any response hits empty air. Skirmisher units are often excellent foragers or scroungers, perhaps stealing supplies from the enemy or simply finding what a unit less familiar with the area might miss.

Skirmish Tactics

A unit with the Skirmisher trait gains its DM when resolving an engagement using Skirmish tactics, when breaking off or making a Mobility check. In addition the DM applies whenever the unit can take advantage of its capabilities. For example, if the unit has positioned itself high in the rocks above a stretch of road in order to ambush a convoy, members of the unit will benefit from the Skirmish DM during the initial ambush but if they allow the encounter to become a straight-up firefight they will no longer gain the DM. On the other hand, if the plan is to wear down the enemy by making feint attacks from different directions and melting away whenever a determined response develops, the sub-units making these attacks will benefit from Skirmish unless they are brought to direct action.

Skirmishing tactics rarely win battles in the conventional sense – by definition skirmishers are unlikely to end the engagement in control of the battlefield – but they can inflict disproportionate losses on the enemy and tie down much larger forces. If there is a risk of attack every time a patrol or convoy moves through an area, support must be made available. This pulls in additional enemy forces who must be kept supplied and even if there are no contacts the enemy will suffer operational losses and wear on its vehicles and equipment. Skirmish tactics can also be used to provoke a response from the enemy, for example by harassing a forward position in the hope that a relief expedition will be sent. This can then be ambushed whilst the force attacking the position fades away or keeps up its low-level pressure.

When skirmishing tactics are used, whether by the Travellers or their enemies, the Referee must keep in mind the morale effects and pressure on the opposing commander to ‘do something’. A hard-nosed military analysis might conclude that the enemy has no real chance of taking control of an area or that a skirmishing force is insignificant but the steady dribble of casualties will demoralise troops in the combat area and not sit well with military superiors. It is possible to force a withdrawal from an area by making it unpleasant or to wear down an enemy that keeps sending powerful forces to chase ghosts.

In this way an enemy using skirmishing tactics can produce demands from the client that the mercenaries do something they consider unnecessary or unwise, or can cause allies to place themselves in a compromised position. The mercenaries can do likewise to their opponents or might use their skirmishers to provoke the enemy. In some cases skirmishing is all that is possible for an overmatched force and being seen to be doing something, however minor, can keep a cause alive in the minds of prospective followers.

Sharpshooter/Skirmisher Warband (TL8)

This loosely organised force is typical of those cobbled together by backwater colonists, insurgent movements and other groups without much access to military hardware or training. Its personnel have gained experience of cooperating with one another and are grouped into small teams bound by mutual trust or friendship rather than formal military organisation. These teams vary in size from two to ten or so, with leaders recognised on an informal but nevertheless effective basis.

Equipment is a mix of civilian weaponry and captured military hardware, tending towards weapons accurate at long range. For personal defence some of the warband carry pistols or sawn-off shotguns but their strategy is always to retreat rather than allow an organised force to come to decisive range. Morale is good enough when the force can skirmish and pull back but if hard pressed a collapse might well occur. In any case, the warband is not effective at close quarters and uses only the most rudimentary tactics. When free to do what it does best, this force is reasonably effective. Most members are skilled with their weapons, some to a point beyond what is normally achieved by regular soldiers, but this applies mainly to careful marksmanship from a safe distance. Close-quarters point-and-shoot is a wholly different matter.

The force uses civilian vehicles for transportation but will normally operate on foot when in proximity to the enemy. Its leaders are wily enough to know how to cause the maximum nuisance and that the enemy cannot know if a sniper's shot was fired by a lone gunman or whether an ambush is waiting for the response force. Ideally, a weak response will be met with harassing fire from dispersed groups, causing casualties among the responding force, whilst a strong response will find the skirmishers long gone. Warfare of this sort is a long game, in which the enemy only has to get lucky once for the warband to be decisively defeated. Its leaders know this and use their knowledge of their home area to pick their fights.

RECONNAISSANCE AND STEALTH SPECIALISTS

Sometimes the aim of an operation is not to confront and defeat the enemy. Ultimately this may be necessary in order to bring the campaign to conclusion but reconnaissance plays a vital part in planning and coordinating any military operation. Likewise, stealth is an enabler rather than a function – not being detected is all very well but there is little point in sallying forth with the sole intention of hiding from the enemy. Stealthy units can infiltrate enemy positions, conduct sabotage or get into position to launch a ‘louder’ part of the mission and the fact that the enemy does not know anything has happened can add value. A successful reconnaissance of the enemy’s positions is useful but if the enemy knows it has been done they may take measures to invalidate the information, such as modifying their fortifications or making ready to repel an attack.

RECON SPECIALISTS

Direct reconnaissance is the primary mission for some specialist units, whilst warfighters and most other formations can benefit from the information uncovered by their recon team. Direct reconnaissance, in this context, is carried out in close proximity to the enemy. Recon units will usually, but not always, prefer to avoid contact with hostile formations. However, contact may be necessary if the force is trying to evaluate enemy capabilities as it permits hardware, tactics and overall competence levels to be assessed.

Distant Reconnaissance

Distant reconnaissance is effective at discerning the ‘big picture’ but may or may not be able to make out small details, which could be important. Distant reconnaissance can be carried out by satellites or ships in orbit, by aircraft or high-flying grav vehicles. Electronic warfare units can also carry out recon tasks but specialist electronic-recon units are rare. Most EW formations carry out intelligence-gathering as part of a wider remit. Distant reconnaissance is usually safe for the personnel involved unless the enemy has specialist capabilities to counter the methods used. Even then there is little hazard for personnel if a remote recon platform – such as a satellite – is attacked. Losing remote platforms can be expensive, however, and make it impossible to complete a mission.



Grav vehicles, aircraft and space vessels are likely to be detected when conducting remote reconnaissance – assuming the enemy has relevant sensor capability – but may not be recognised as recon platforms. If there is significant local traffic it is usually possible to blend in and even if not what appears to be a transport craft might mount sensors capable of conducting long-range recon. Even if detected and identified, there is still the possibility that the enemy may not possess weapons capable of targeting the reconnaissance platform.

A small satellite can evade detection quite easily if it uses only passive sensors such as cameras and electromagnetic emissions detectors. A detailed active sensor sweep of the likely coverage area will take around four hours and detect any passive satellites if a Difficult (10+) Electronics (sensors) check is made. This drops to Routine (6+) if the satellite is emitting. Emissions from an apparently innocent aircraft or grav vehicle can also be identified by matching them with known and likely sensor data. This is more properly an electronic warfare task.

Attacking a satellite once it is identified is normally a matter of having weapons with sufficient range and precision. Long-range air-to-air missiles can be adapted for the task, if launched from a high-flying aircraft. Long-range aerospace defence weapons such as huge laser cannon or missiles will have no difficulty destroying a small satellite or a grav vehicle or spacecraft could be used to move close enough to destroy it. This does risk escalating a conflict beyond the immediate battle area if a 'limited war' is in effect.

Direct Reconnaissance

Direct reconnaissance is a lot more dangerous for the personnel involved. Cynics have described the simple reconnaissance patrol as 'follow this route until something tries to kill you. If you survive, come back and tell us what it was'. For low-skilled troops sent out to perform recon, this is not all that far from the truth. Specialist units have better options than blundering along until contact with the enemy occurs. A specialist recon unit will normally be stealthy or fast, or perhaps both. Foot patrols or units infiltrating enemy territory will be skilled at using unexpected routes, identifying and avoiding likely observation or ambush points and at moving quickly and efficiently through the local terrain. For small units this can be a matter of using Navigation and Survival to find an unobtrusive but effective route, and Stealth to avoid detection when close to an enemy position.

Armoured reconnaissance formations are unlikely to be as stealthy as a foot patrol, although good use of terrain can hide grav or ground vehicles from observation. The same applies to fast grav vehicles, armoured or otherwise,

used for reconnaissance. Routing the mission around known enemy units or sensor emissions can permit deep penetration before detection occurs but getting close enough to obtain useful data almost inevitably means being detected. At this point evasion and mobility are the unit's best assets, perhaps accompanied by sufficient firepower to eliminate minor threats.

Recon Specialists

To qualify as reconnaissance specialist unit, a formation must meet one or more of the following criteria:

Mobility: The unit should be faster in at least some kinds of terrain than the typical formation of its type.

Stealth: The unit should be capable of hiding from its enemies or using terrain to conceal its movements.

Equipment and Skills: The unit must possess a means of conducting remote reconnaissance if it is to be employed in this manner. For direct recon units the requirement is for personnel skills at observation, fieldcraft and the ability to operate independently. These are modelled by Recon, Stealth and Survival or Navigation.

The most common mercenary recon units, are small and infantry-based, using grav transport for insertion and exfiltration, and grav-mobile 'fast recon' units which operate with less subtlety and sometimes double as a light strike formation. Some of the latter use light grav tanks if they can afford them but most make do with small, fast vehicles. Two-seat, open-frame grav bikes are favoured, as they combine the speed to get in and out with agility and small size. Against an alert enemy such platforms are risky to use but well suited to a quick in-and-out before the opposition can mount any significant response.

Foot units generally expect to spend more time in enemy territory and are the preserve of patient, steady personnel rather than daredevils. These formations are the best for extended observations leading to detailed reports but can be severely endangered if discovered. In a starfaring society, some methods of approach are sometimes overlooked. An enemy might be alert for grav vehicles streaking in from an unexpected direction and might have sensor posts established to warn of the intrusion, yet be taken entirely by surprise by a team that uses canoes or just walks.

Deception plays a part, too. It is sometimes possible to avoid recognition even if detection is inevitable. The more reliant the enemy is on remote observation, the easier this is. For example, an enemy might maintain drone patrols over an area and be certain to detect a force moving through it but could be deceived into assuming a slow-moving group of people are refugees, farmers trying to make a living in the conflict zone or some other innocent party. The rules of engagement often prohibit engagement of ground targets unless confirmed hostile, so if the only response available is aircraft or long-range weapons the mercenaries might be able to conceal their weapons, dress up as locals and simply drive or walk away. So long as ground forces do not get close enough to positively identify them they may well get away with such a piece of blatant cheek.

Where a recon formation attempts to evade detection this is best simulated with opposed checks between enemy observers and sensor operators and the formation's personnel. This will be modified by smart routing and use of terrain. Indeed, one recon mission may necessitate another. For example, a mercenary unit has been hired to find out what the purpose is of a new enemy installation and what forces guard it. Being smart operators the mercenaries begin with a careful reconnaissance of the approaches to the target area. This enables them to plot a route for their grav transport with minimal chance of detection and a larger area where it should be safe whilst the foot team moves into position. A good observation point is chosen, with a well-covered exfiltration route and the approach is plotted out so that the foot team knows what to expect and where the likely hazards are. The actual mission now has a much greater chance to succeed, reflected in positive DMs to Stealth, Navigation and Survival checks along the way.

Recon formations can be used to cleverly deceive the enemy. There is always the risk of alerting the opposition to the client's intentions if recon is detected in a given area. However, by also conducting reconnaissance of other targets, and perhaps being a little more obvious about it, the mercenaries can possibly convince the enemy that they are intending to strike or otherwise act against the wrong target.

There is a limit to how much information can be obtained from remote reconnaissance. Cameras can only see what is in their field of vision and although their resolution is excellent they can give a misleading impression or be deliberately fooled. A typical military reconnaissance satellite can read a newspaper from orbit on a clear day but is as vulnerable to bad visibility as any other optical device. Travellers on the receiving end of remote reconnaissance might turn the tables

on observers by building dummy vehicles, structures and weapons. Indeed, kits for these are commercially available, although they need to be embellished or will be recognised by a recon system that has been given the exact parameters of the fakes. This allows a double bluff to be performed – either allowing dummies to be recognised then substituting the real thing or modifying real equipment to look exactly like the fakes. The Travellers and their enemies can engage in such tactics.

Deception Operations

When creating deceptive dummies or concealing real assets, the person overseeing the operation should make an Average (8+) Deception check. The Effect of this is applied as a secret negative DM on enemy Recon checks. If the Effect is still +3 or better the deception is identified and fails completely. On Effect 0 to +2 the information seems good but is inconclusive on the subject of the deception. For example the Travellers may see dummy tanks and not know whether they are real or not. On Effect -1 or worse the deception succeeds and the observer will be sure they have seen what the deceivers wanted.

If the secretly modified check results in a fail but the Travellers think they have succeeded, the information gathered will be to them presented as fact. Referees need to be careful that the Traveller understand this is not any form of cheating; it is a deliberate deception on the part of their enemies. Suitably paranoid Travellers may start cross-referencing information gained from reconnaissance with that coming in by other routes. If the enemy's equipment rosters have been monitored for some time, and there is no indication of nuclear anti-aerospace missiles ever being obtained, then the Travellers might be suspicious of apparently reliable images of them. This strays over the border into intelligence work however; reconnaissance is about getting information first-hand, intelligence is broader in scope and includes analysis work. Many recon units include a few personnel with appropriate training.

Recon Operations

The quality of information gained by a reconnaissance asset depends on proximity, duration of the information-gathering attempt and skills of the people involved. A party of observers hiding near an enemy base might see the armoured column arrive and be hidden in the base, where a set of satellite photos could potentially miss it. When a recon mission is carried out the leader of the party may make a Recon check, or Electronics (sensors) if that is more appropriate, to determine the nature of the information gained. This check is subject to modifiers for bad conditions at the Referee's discretion and to any secret negative DM for an attempt to deceive

the observers. The level of confidence the observer has in the information is based on the roll before any secret modifier is applied; this means that typically a recon unit will know if their data is reliable or fragmentary... but of course how they present it to their superiors or the client is up to them.

The difficulty of the Recon check is based on circumstances. For a direct observation by personnel on the ground the check is Average (8+); for fast-moving flying or ground platforms the check is Difficult (10+) and for remote observation the check is Very Difficult (12+). This has nothing to do with avoiding detection; it is merely an indicator of the information gathered. For every extra 1D hours of observation, +D3 can be added to the Effect to a maximum of +4. If this is still not enough to produce the level of detail the observer wants they must run a new reconnaissance mission.

Fast Recon Force (TL9)

This small mercenary force exists to provide direct reconnaissance services to a mid-tech army or any other client requiring it. It consists of a four-vehicle section operating open-frame two-seater grav speeders and a support section with a grav truck carrying a small mobile workshop. Total personnel complement is usually around 15-18 depending on recruitment levels.

The speeders are fitted with pintle-mounted weapons that are ideally only used to deter pursuit. Other than a lightly armoured glaucis/streamlined front they are unprotected and rely upon speed to avoid dangerous engagements. The vehicles carry a small reconnaissance package including cameras, electronic emissions detectors, radar and lidar, which is normally operated by the passenger.

Intelligence Gathered

Effect	Level of Success	Example
-6	Effectively a complete failure. Some general information is obtained but likely to be incorrect.	The presence of buildings and vehicles, with indications of general type that are likely to be unreliable. Trucks might be identified as tanks or a field hospital mistaken for a logistics dump.
-5 to -3	Very Poor. Little information is obtained, some of it likely incorrect.	Presence and general type of buildings and vehicles, with reasonable confidence. Armoured vehicles will be identified as such but type may be wrong – tanks identified as APCs and so on. Information on presence of personnel is limited to ‘not deserted/ no personnel seen’.
-2 to -1	Poor. Some general information is obtained, with a reasonable degree of confidence.	Large buildings are likely to be identified with reasonable confidence – bunkers, command posts, aerospace defence installations and so forth. Vehicles will be identified by general type – ‘grav tanks’ rather than ‘specific model of grav tanks’. General numbers of personnel present will be indicated.
0	Adequate. General information is obtained.	Basic information on the target – types of buildings and vehicles present, aerospace defence weapons and fortifications, general personnel numbers, with some specific identification of assets.
1–2	Good. Sufficient general information is obtained with some precise details.	Solid information on the target, its function and general level of readiness. ‘Forward operating base capable of supporting infantry and vehicles, up to 300 personnel present, regular ground traffic, aerospace defence battery identified’. Specific individuals will only be identified by obvious characteristics such as impressive uniforms or obvious physical features.
3–5	Very Good. A great deal of information is obtained with some precise details.	Detailed information including specific models and numbers of vehicles and weapons in use by personnel. Specific individuals will be identified if going about normal business. If a deception has been attempted and the Recon check still has Effect 3+ it will be detected for what it is.
6+	Excellent. Near-perfect information is obtained with many precise details.	Virtually every available piece of information, with a high degree of confidence. The observer will be able to positively identify specific individuals even if they are attempting to evade detection. If a deception has been attempted and the Recon check still has Effect 3+ it will be detected for what it is.

Vehicle and support crews are equipped with light body armour and personal defence weapons, with a few rifles or light support weapons available for base-security work. The unit specialises in fast recon including a dangerous version of reconnaissance by fire, which amounts to shooting up a suspected enemy location to see if return fire emerges. Whilst unsubtle this does produce a reasonable estimate of enemy capacities.

In theory this unit could provide highly mobile fire support for local infantry but this exposes personnel to much greater risk. A strike mission would command a higher rate of pay and might require some in-unit discussion before acceptance, although the recon team would generally be willing to help out a unit they saw in trouble and call it part of the job.

SNIPERS AND SHARPSHOOTERS

There is a lot more to being a sniper than marksmanship. The most important skill a sniper can have is observation – that and infinite patience. Snipers are trained to infiltrate enemy territory and exist there for some time if needed, with excellent reconnaissance and survival skills as well as extreme stealth. Whilst anyone can call themselves a sniper, formal training is hard to come by outside the major militaries and veterans with the right skills are eagerly snapped up by mercenary recruiters.

A qualified sniper will, at a minimum, have one skill level in each of Recon and Stealth, and a net DM+3 or more with their primary weapon. This can come from DEX or skill or both. Most snipers will be more proficient than this, and will additionally have skills such as Navigation and Survival that assist in bypassing threats and tolerating their environment. A sniper may also use Deception to assist in their craft.

Marksmen, or sharpshooters, often have the same excellent weapons skills as snipers but have not completed the full training programme. They are still useful as enhanced-skills infantry personnel who may have better than average observation and fieldcraft skills. What makes a true sniper more deadly than a marksman is the ability to strike from concealment and slip away or evade detection afterwards. It may be that any sufficiently skilled marksman could make that 800 metre shot to take out the enemy commander but only an expert sniper would be able to get into position and set up the shot.



Sniper or Sharpshooter Specialists

To qualify as a specialist sharpshooter unit, a formation must meet the following criteria:

Weaponry: At least 25% of the unit's personnel must be equipped with highly accurate weaponry. For infantry this typically means sniper or anti-materiel rifles, or an equivalent energy weapon. A vehicle or fire support unit requires long-range direct fire weapons such as gauss cannon mounted on a suitable vehicle or fixed installation.

Weapon Skills: The unit must possess above-average skills with its primary weapons. This translates to an overall skill level of 2+ at a minimum among personnel who will use the weapons. Other personnel should have an equivalent level of skill in their roles.

In addition, to qualify as a sniper force the unit must meet two or more of the following criteria:

Fieldcraft: The unit's personnel must possess an above-average level of skill in Navigation, Survival and related non-combat field skills.

Observation: The unit's members must possess above-average observation skills.

Stealth: The unit should be capable of hiding from its enemies or using terrain to conceal its movements.

A unit equipped with long-range precision weaponry such as laser cannon or hypervelocity anti-tank guns can also qualify as a sharpshooter force but not as snipers as this represents a specific skillset.

Sniping in the Field

There are two broad types of what is normally referred to as sniping – field and security. The core skills are the same but they are applied differently. Security sniping is usually carried out in urban areas and often at ranges of less than 100 metres. Security snipers may have to hold a weapon on target for a long period, awaiting the order to take a shot, and will have to recognise threatening movements or weapons amid bustling crowds. Field sniping is generally free of these constraints but requires shooting over much greater distances and far greater use of stealth.

Snipers rarely work alone. Teams are usually two or three personnel. In most forces, the sniper is the leader of the team, regardless of actual rank, and will be assisted by a spotter. This individual may be a fully qualified sniper, who prefers to remain in the spotter role, or a less experienced sniper-in-training. Typically both will have a sidearm or personal defence weapon as a backup. The sniper will always carry a primary weapon suitable for their role, whereas the spotter may be armed with a sniping weapon or something more suited to a close-range firefight such as an assault rifle. If a third soldier is assigned they will be the 'security element' of the team armed with a standard combat rifle or perhaps a light support weapon.

Although the ability of a sniper team to take out targets at great range should not be underestimated, their benefit to their parent force might be increased by not shooting. A sniper team is a powerful reconnaissance asset and may be able to contribute more by passing along information or guiding artillery strikes than actually shooting at anyone. One common tactic is to send a sniper team into the target area ahead of a mission and have them find a good point to observe from. The snipers can then guide an infiltrating force to their target, bypassing enemy strong points and cover their retreat or eliminate major threats such as support weapon positions. Another trick is for a sniper team to be detached from a patrol or convoy and remain in position after the rest of the force has moved on. This can be useful in catching hostiles planting mines or explosive devices when they think the coast is clear or who might try to infiltrate after a patrol has moved on.

A sniper team functions much of the time as a recon asset and must be willing to spend long periods in proximity to the enemy without opening fire. Lone sentries and the like may be tempting targets but ultimately they are unlikely to be worth giving away the presence of a sniper team. A sniper unit that spends days in the field getting into position and waiting for an opportunity, then withdraws without taking any direct action against the enemy, may still have played an important role in being there in case they were needed.

The psychological effect of suspecting a sniper is working the local area can be debilitating to 'lesser' troops. Most combat, even firefights at close range, tends to be oddly impersonal. Automatic fire directed at fleeting targets does not feel as vindictive as a sniper selecting a target then eliminating them. Anyone venturing out of cover knows they may be shot

with no possibility of retaliation at any moment... or there may be no enemy personnel for kilometres. This can make the enemy force jumpy and trigger-happy, or reluctant to move. A single sniper can pin down a large force in this manner and draw in additional troops to search for their hiding-place. Knowing when to shoot, when not to shoot and when to retire are all part of the sniper's mentality.

Instead of shooting as many of the enemy as possible, a good sniper will take out the personnel most likely to get everyone else organised. Communications operators are high-value targets, as are support gunners. Obvious leaders can be taken down to cause confusion and 'anyone pointing' is a clear indicator of a potential high-value target. The alternative is to shoot just once then either slip away or remain concealed. A single shot that takes out a member of the unit – whether a high-value target or some poor unfortunate – can paralyse the force for some time without giving away the sniper's position. The sniping team might be long gone before the enemy gets moving again or could be lurking to repeat the process. A two-soldier team could hold up a company or larger force for hours in this manner.

The Referee should bear these factors in mind if the Travellers – or their opponents – are prone to making use of snipers. The psychological effects are probably more significant than the casualties inflicted, unless the target is someone or something very important. An anti-materiel rifle could smash up a communications array or sensor equipment and make it difficult for the enemy to coordinate or respond to a developing situation. In this context snipers are enormous force-multipliers but may need the support of other troops to get in or out of the target area.

Hide and Sneak

If time is available to find and creep into a position, the sniper may make an Average (8+) Deception check to pick somewhere the enemy will not look. The Effect of this check acts as a negative DM on Recon checks to locate the sniper's position. Adequately skilled snipers will hide themselves; good snipers will hide themselves in such a way that the enemy is deceived or impeded. For example, any sniper or marksman would be able to spot a good hiding place near the top of a nearby hill but a more skilled one knows that is where a competent enemy will look, so chooses a slightly less perfect spot somewhere else – quite possibly in a location where they can ambush the searchers. Obviously, anyone could attempt this but snipers are trained both to do it and to look for places a similarly skilled individual might use.

Locating or eliminating a sniper can be difficult. Rules for locating a shot are found on page 19 of the *Field Catalogue* but quite often the first shot comes as a complete surprise and everybody is too busy scrambling for cover to try to figure out where it came from. The sniper may bide their time or crawl slowly away before a serious attempt to locate them develops. It may be that the targets have absolutely no idea where the sniper is, or was. One frequent response is to blast every possible position of concealment. This can actually work, especially against snipers who are unimaginative or have few good options. A lot of churches have lost their belltowers this way.

A more scientific approach is to try to predict the sniper's location. If more shots are fired the task becomes simpler but a sniper using a suppressed weapon or one with a low signature will be very difficult to locate by simply watching for physical signs. A full sniper search can be carried out whether the target is firing, hiding or moving away, and can force the sniper to decide between shooting someone who is getting too close, abandoning the mission and trying to exfiltrate, or remaining concealed with hostiles in close proximity.

A sniper search could be carried out in brute-force style by having every available soldier start raking through the bushes or walking a patrol line. This can work but relies on the nearest searchers spotting an expert at hiding. A more scientific method is to try to predict where a sniper might shoot from. Typically this will be a position that offers some elevation, good concealment and usually a concealed or covered route out. The latter is not always possible but is preferable unless the sniper expects their egress to be covered by other forces or does not care about escape.

Working out where the sniper is might be a matter of figuring out where they could not be. Eliminating positions with intervening terrain or a very low likelihood of making the shot reduces the number of possible locations. Searchers can be directed towards these points or, if the goal is to capture the sniper, exfil routes can be closed off. Whether searchers physically enter possible sniper locations or eradicate them with intense gunfire is a tactical decision but a fundamental rule of sniper hunting holds that the sniper is alive and well until a body has been found.

A more subtle version of the sniper hunt can be carried out in the mind of another sniper or an expert sniper-hunter. This comes down to deciding where the hunter would choose as a position and is easier if they

are familiar with the hunted sniper's training or their previous work. A predictive sniper hunt can be carried out by anyone with training in relevant weapons (signified by at least one level of Gun Combat) and at least one level of either Survival or Navigation. The hunter must make a Difficult (10+) check using the highest of these skills, with the sniper's Deception as a negative DM. Success does not necessarily mean the sniper has been spotted but does indicate the most likely position. Attempts to actually spot the sniper may use the Effect of this check as a DM. A similar method is used when attempting to predict where an enemy or security force might place their snipers and set up an intercept or avoid fields of fire.

Special Operations Sniper Team (TL8)

This six-soldier team specialises in eliminating high-value personnel and equipment at long ranges but can operate as a conventional sniping unit if necessary. The unit comprises three fully-qualified snipers, a specialist spotter, a security expert and a scout. The latter two are trained to act as spotters when the unit is broken down into three two-soldier teams.

More commonly, the three snipers work around a single large anti-materiel rifle that is carried disassembled among the whole team. Each sniper has their own rifle and a sidearm or personal defence weapon, with two of the snipers protecting the unit whilst someone uses the big gun. The other three personnel have weapons more suited to a firefight and provide close-in security for the unit's position or ensure the egress route is clear. On the move, the scout may range ahead and when hunting other snipers this soldier typically slips away to flank the target or block their escape route.

The unit is normally attached to a force operating in difficult conditions such as mountains or among tall buildings, providing a means to eliminate enemy support weapons or communications assets that cannot be reached by troops on the ground. It is also a useful reconnaissance asset and might guide other forces to their targets without engaging directly. The unit may also be tasked with hunting 'lesser' snipers – or venturesome riflemen who fancy themselves as one – or providing route security by establishing an overwatch position and waiting for hostiles to begin making preparations for an attack.

Snipers and Assassins

It is generally difficult to achieve an instant takedown against an opponent who is aware of a threat. Even quite small movements can turn what looked like a perfect shot into a marginal hit. However, under some circumstances it is possible to obtain a one-shot kill. For this to be possible the target must be unaware of the threat and not moving around much. A gunman shouting threats and taking the odd step can be tracked by a marksman, but someone pacing about erratically or carrying out a task that requires a lot of small movements cannot.

A one-shot takedown can be attempted from a range of up to five metres with a handgun, 25 metres with an assault weapon and 50 metres with a longarm. These ranges are doubled if the shooter has a prepared rest, such as a security marksman's position atop a nearby building. Beyond this range a normal aimed-fire attack is all that can be attempted.

If the criteria for a one-shot takedown are met – the target is unaware and not moving much, and the attacker is free to act without distractions such as being under fire – an aimed shot can be made at DM-2. If this shot hits, damage is increased by 1D for every point of Effect. It is possible to aim for several actions before attempting a shot of this sort but this increases the chances of being detected.

The same technique can be used to silently eliminate sentries with a hand weapon such as a knife. If the attacker can get close enough undetected they may make an attack at DM-2 and if successful add 1D damage per point of Effect.

These techniques are most likely to be used by snipers and recon specialists but any suitably stealthy individual may make the attempt if the opportunity arises.



Ghillie Suits

An important part of camouflage – along with colour and shading – is its ability to conceal the distinctive shapes of people and hardware. There is only so much that can be done for the average soldier, who must consider freedom of movement and the ability to move in and out of vehicles without snagging but someone intending to spend a long time in one place or move very slowly can get away with more bulky clothing.

Traditionally named a ghillie suit, a sniper's personal camouflage outfit is made rather than being bought, although a base garment or thermal-concealment layers might be purchased. Making a ghillie suit is something of a rite of passage for a newly qualified sniper and each is unique. A ghillie suit must be tailored to the general terrain a sniper intends to use it in and will be modified before and even during a mission. As a sniper crawls slowly through the undergrowth they may add bits to their suit to make it fit changing conditions.

This degree of preparation allows a sniper to go beyond normal camouflage and become almost invisible even at distances of a metre or two. During preparations for a mission, the sniper can make a Deception check to modify their suit. The difficulty of this check is Average (8+) for most terrain – forest, grassland, mountain, desert or arctic. Highly unusual terrain may require a harder check. The Effect of this check is used as a negative DM against everyone trying to spot the sniper, providing they are still or moving very slowly and attempting to remain unseen. This DM is applied on top of the concealment benefits of their basic camouflage. If the check is failed the sniper may not have time to start over and must settle for using their suit without improvements, which grants only its usual camouflage benefits.

ENGINEERING AND HEAVY WEAPONS SPECIALISTS

Military engineering is all about solving problems. Whether this means cutting a path through wire, removing a minefield or bridging a river to allow an advance to continue, engineering specialists are critically important to most military operations. Engineers also assist heavy weapons formations in preparing positions and clean up after some of the most destructive weapons. In this context 'heavy weapons' refers to large artillery systems and the like, as well as superheavy or mass-destructive weapon systems.

PIONEERS AND ENGINEERS

There is considerable overlap between the duties of assault pioneers and combat engineers, and terminology varies. Some militaries make little or no distinction whilst others have words for troops performing specific parts of the overall field. In this context, pioneers (or assault pioneers) clear obstacles and facilitate operations directly in the face of the enemy whilst combat engineers can do so but have a wider skillset. Pioneers tend to be infantry, whereas engineers usually have vehicles and can undertake heavier work.

Combat engineering is a catch-all term for building and demolition work carried out in a military context. It is governed by the Profession (combat engineer) skill whether used by pioneers or engineers. Combat engineers are trained to dig quick fortifications and build more substantial ones, to lay and clear mines and obstacles such as anti-tank-ditches and wire, to set up field communications and to make safe unexploded ordnance and improvised explosive devices. They also undertake larger construction projects such as roads, permanent bases and bridges. When carrying out a task governed by a specific skill such as Explosives or Mechanic these are used as normal. Profession (combat engineer) does not cover working with explosives or mechanical systems.



Combat pioneers are part of the infantry and are usually equipped similarly. Their role is a dangerous one, involving not only solving problems for the infantry force but also showing ordinary soldiers what to do. Anyone can dig a hole to shoot from and a trained soldier will be able to dig a good one of the correct depth complete with grenade sump. A combat pioneer or engineer can do it more efficiently and create an optimised fighting position that will be less prone to collapse or fill up with water. A hole is, ultimately, a hole but a combat-engineered hole will be marginally less uncomfortable and provide better protection.

Most activities undertaken by engineers are not in the face of the enemy. Construction work, surveying, road-building and the like all support a campaign and may ultimately plant the seeds of victory but tend to go unnoticed much of the time. However, sometimes a project must be carried out in dangerous circumstances. Driving a road across a hostile areas, with the possibility of attack by insurgents, may require the engineers to create security detachments and even operate their own small counterinsurgency campaign. Protection in the form of other units may or may not be available.

The non-combat parts of such a mission are not entirely without hazard, since combat engineers tend to operate in remote areas or difficult terrain. Mercenary engineers might remain in a supposedly pacified former war zone long after other troops have left, repairing roads and clearing minefields. This can bring them into contact with insurgents determined to carry on the war or criminal gangs taking advantage of the disruption. Post-conflict clean-up can be one of the most challenging tasks a military unit might face.

Engineering in the face of the enemy, or pioneering to clear the way for an attack, is hazardous but can make the difference between a failed assault and an easy victory. An enemy that thinks their flank is protected by obstacles or impassable terrain may be caught by surprise or have inadequate forces positioned to defend the area. Clearing a path might require the pioneers to operate stealthily or disguise their activities.

Typically, engineering or pioneering tasks will be enablers for other activities and will form the background to a mission or even a campaign. However, it is entirely possible to create a campaign around the adventures of a combat engineering unit, especially if they pick up odd jobs that nobody else has the equipment, training or desire to do.

The skills of an engineer or pioneer have many applications, not all of them military in nature. Profession (combat engineer) can be used to plan a good position with interlocking fields of fire and spot

Pioneer or Engineering Specialists

To qualify as a specialist pioneer unit, a formation must meet the following criteria:

Equipment: At least 50% of the unit must be equipped for combat pioneering tasks. This requires only simple tools of which at least some are part of most soldiers' loadout anyway. Only the most poorly outfitted troops will fail to meet this criterion.

Skills: At least 50% of the unit's personnel must possess relevant skills at a minimal level of 0. Relevant skills are usually Mechanic and Profession (combat engineer) but other skills may be substituted depending upon circumstances.

In addition, to qualify as an engineering formation the unit must meet the following criteria:

Equipment: The unit must possess heavy equipment (vehicles, robots and/or machinery) capable of undertaking general or specific engineering tasks. At least 50% of the unit's personnel must be operators or crew of these systems.

Skills: At least 10% Of the unit's personnel must possess Mechanic or Profession (combat engineer) at a level of 1+.

weaknesses in friendly or enemy dispositions. For example, a skilled engineer might be able to identify an approach route to enemy positions, which takes advantage of 'dead ground' out of reach of support weapons. Well-sited positions would allow the enemy to cover depressions and reverse slopes to some extent but an unimaginative or unskilled enemy commander might site their support weapons poorly. Something as simple as knowing which stretch of road the enemy's anti-armour weapons cannot target or where it is possible to shelter from their anti-personnel support weapons, can make all the difference.

To qualify as combat pioneers a force must be primarily an infantry type and must be equipped to perform basic field engineering tasks such as digging trenches, cutting or laying barbed wire and the like. This requires only a small outlay, making it simple and easy to create a pioneer contingent. Combat engineers, on the other hand, require equipment enabling them to carry out major engineering tasks. This includes multipurpose armoured engineering vehicles, armoured recovery

vehicles, bridging units and the like. To qualify as combat engineers at least 50% of the unit's personnel must either be crew for engineering vehicles or capable of undertaking or assisting with engineering work. This includes robot wranglers, skilled labourers and almost any other personnel so long as they know enough to follow the instructions of suitably qualified engineers.

Engineering and Pioneering

Most engineering tasks are fairly straightforward unless the enemy decides to impede them. Engineers have an old adage that 'an obstacle not covered by fire is not an obstacle'. Wire can be cut, ditches filled in and obstacles removed or reduced to fragments with well-placed charges. This all gets a lot more complex when there are booby-traps to deal with or enemy machineguns sweeping the position.

Most engineering or pioneering tasks can be resolved using the Profession (combat engineer) skill, although it may also be necessary to deal with other hazards. Indeed, creating a situation where the unit's lead engineer can make that one skill check might require a minor combat operation involving suppressing machinegun nests and locating a sniper. Combat engineering work will usually be a 'clock' for the mercenaries' adventures, creating a situation where the Travellers must protect the engineers for a certain length of time or where they have to hold out until the engineers have cleared their escape route. An action by the combat engineers might be the critical point of the mission, such as when an engineer must be escorted and protected whilst they disarm enemy demolition charges.

Armoured Recovery

Armoured recovery is similar to engineering work in many ways. A recovery team will usually operate outside the immediate combat area, conducting field repairs on disabled vehicles or bringing them back to a workshop for more extensive repair. No job in a combat zone is ever safe, of course, and a recovery team might encounter small groups of enemy troops infiltrating or perhaps simply cut off from their own side. The recovery job becomes a lot more dangerous when the Travellers are required to accompany a fast-moving force in order to get damaged or broken-down vehicles back into action.

The majority of armoured recovery teams make use of vehicles capable of carrying a tank or APC, although some operate on a small budget and cannot afford such expensive equipment. In this case they may use light transport to reach damaged vehicles, selecting those that can be made operable for return to combat or removed from the battle area under their own power.

Battlefield Salvage

Salvage usually takes place after combat has ended but there are times when it may be necessary to scour the battle area for supplies, ammunition or anything else needed to keep the force in action. Armoured recovery can be considered a subset of salvage, requiring heavy equipment, but a more general salvage unit can operate with little more than hand tools and some form of transport.

A skilled salvage unit might have the Champion Scrounger capability trait and could also gain Tough Kit. In this case Tough Kit reflects an almost uncanny ability to find the right spares and return damaged equipment to service. Members of a salvage formation will need skills such as Mechanic, Recon and possibly Profession (combat engineer). The ability to sneak about a semi-active combat zone or navigate without electronic devices may also be useful but otherwise there are no formal qualifications to be good at salvaging. However, a client is unlikely to hire a purported salvage unit unless it possesses suitable equipment. General engineering vehicles, armoured recovery platforms and a suitably large array of tools will convince a prospective client the unit can get the job done.

A salvage unit cannot find what is not there. If a battle was fought between TL7 forces with no outside assistance there will be no grav tank components to salvage. Likewise, if the level of destruction was immense there may be nothing of use left afterward. However, in most cases a salvage unit can find something to use or sell. Much depends on whether one or both sides had time to remove damaged equipment and of course the scale of the battle. A salvage operation can be abstracted using the procedure here.

A salvage attempt takes 3D hours, representing either a dash through a large battle area grabbing the most obvious and best stuff or a painstaking search of a smaller combat zone. A salvage unit can cover a fair amount of ground if just searching but extracting anything useful from a battlefield can be a lengthy undertaking. The value of salvage found depends upon two factors; the size (and skill) of the salvager unit and the scale of battle. In general, encounters involving larger forces tend to leave behind more valuable salvage – the chance of finding a salvageable grav tank after a 20-a-side skirmish is rather lower than after a division-scale donnybrook.

To determine the value of salvage found, roll 2D and add the unit's ECEI modifier, plus any DM for unit traits, and apply the following modifiers:

Scale of Action, Platoon: DM-6
 Scale of Action, Company: DM-3
 Scale of Action, Battalion: DM+0
 Scale of Action, Brigade: DM+3
 Scale of Action, Division: DM+6
 Each salvage attempt after the first: Cumulative DM-1

The Salvage Value table shows a multiple of the salvaging unit's monthly hire rate. Larger units will be able to extract more salvage from a battle zone than smaller ones and multiple sweeps are possible. Other salvagers might have already searched the field or taken the best salvage for themselves, and the possibility of running into other groups with the same intent – or military personnel on other missions such as securing the battlefield – makes this a potentially hazardous occupation. The Referee can rule at any time that there is no worthwhile salvage left or can choose to place something interesting or valuable among the finds if that suits the needs of the campaign.

The cash value of salvage found represents what can be put back together with some work, possibly requiring the Travellers to source spares from elsewhere. If the Travellers just want to sell this salvage they can do so but if specific items are desired they must be 'bought' using this salvage value. For example, if the Travellers really want a laser cannon and it is feasible one might be lying around somewhere, the Referee can ask for a Profession (combat engineer) check to find enough bits to put one together. The cost of this weapon is taken from the value of salvage recovered, representing the Travellers using some of what they found to get themselves a laser cannon. Anything left over can be sold and a shortfall could be made up from another salvage operation or simply paid for out of the unit's coffers. This assumes the necessary parts are available for purchase.

Salvage Value

2D+ Modifiers	Value Multiplier
0 or less	0
1-2	0.1
3-4	0.2
5-6	0.3
7-8	0.5
9-10	0.75
11-12	1
13-14	1.5
15 or more	2

SUPERHEAVY WEAPONS SPECIALISTS

Heavy weapons such as plasma guns and artillery rocket launchers are impressive but not really out of the ordinary on the modern battlefield. The presence of such weapons will still cause apprehension in those vulnerable to them but they are a part of the spectrum of 'usual threats'. Superheavy weapons go beyond what the typical soldier will encounter. When operated by mercenaries, they are usually hired as a single weapon or delivery system plus crew and security personnel. For example, a superheavy artillery weapon may be escorted by a couple of grav gunships and an infantry contingent but it is the weapon's capabilities that are being hired. The security and support crew are there to keep the weapon in action rather than to operate directly against targets.

Superheavy weapons are considered to be company-sized units, a larger formation than their personnel or weapon numbers would indicate. A battery of four self-propelled 150mm howitzers can be considered a platoon of vehicles but a single 400mm cannon would be considered a company even if its automation was such it only needed 20 crew. Batteries of superheavy weapons are possible but unlikely to be encountered in the mercenary marketplace, since a single weapon can alter the course of a campaign. For this reason superweapons are often used as plot elements rather than the focus of a campaign. Mercenaries might have to silence one or escort a disassembled weapon to the battle area. The crew of such a weapon are likely to have a relatively safe career well behind friendly lines – unless they are the target of an elimination strike.

Superheavy Vehicles and Artillery

There is a limit to how big a ground vehicle can be before it becomes unworkable. Multiple track systems with independent steering can do much but eventually ground pressure and the inability to manoeuvre between large obstacles will confound attempts to construct a land-mobile platform. Grav vehicles do not suffer from this limitation, making them the best platform for superheavy weapons. A local force might be able to mount such weaponry on a rail-riding platform but this option is not available to mercenaries. Likewise, maritime ships are an option for local forces but unlikely to be useful to mercenaries.

Tactical mobility is not the only problem facing superweapon specialists. The weapon itself and all its supporting equipment must be transported over interstellar distances. This usually requires dismantling larger components and shipping them in containers. A 'mistake' on the manifest, redirecting a critical component, could put a superweapon out of action in



Superheavy Weapon Specialists

To qualify as a superheavy weapon unit, a formation must possess a weapon considered to be more destructive or just plain more massive than a conventional artillery piece. This includes nuclear weapons and exotic explosives such as antimatter bombs, even if the weapon must be emplaced rather than launched at the enemy. A combat engineering unit might booby-trap an objective with nuclear explosives as a one-off gambit but a formation that specialises in the use of nuclear demolitions would be considered a superheavy weapons unit. It is rare – to say the least – that such weaponry is legal in a conflict but a situation could arise where it is deemed necessary. If a mindless horde of bug-like aliens is pouring down a narrow neck of land, a nuclear minefield might seem like a good option. Under most circumstances a nuclear weapons unit would have to operate very carefully or in truly lawless regions, and even then it might face retribution.

deniable manner. Thus superweapon crews need to be highly conscious of security and logistics as well as adept at assembling and striking down their weapon.

Most superheavy weapons are scaled-up versions of standard energy weapons, artillery and missile systems, or may be weapons that would not be considered particularly potent in their normal deployment. By way of example, a 200mm siege mortar is a large but conventional artillery piece, whereas a 200mm maritime weapon represents cruiser-grade armament in a TL5-6 environment. A battleship gun in the 350–400mm range would definitely be considered a superheavy weapon if used in a land battle. Mercenaries might encounter such weapons on mid-tech worlds if they are operating near a coast or where specialist river monitors can reach.

Superheavy weapons are so destructive they do not use the Blast trait. Instead they have Superheavy X/Y/Z. X indicates the 'annihilation zone' of the weapon, in a radius of metres. Almost any target on the ground scale within this area is utterly destroyed, vapourised, shattered or otherwise just gone. Anything within a radius of Y metres (the primary zone) suffers normal damage. Targets out to Z metres (the secondary zone) suffer half damage. Superheavy weapons are always Destructive to a greater or lesser degree; halving 1DD can be accomplished by using D3 for every 1D of Destructive damage.

Lightly armoured or soft-skinned vehicles within the annihilation zone are destroyed along with their contents. Vehicles that have the AFV trait, even if lightly armoured, are sufficiently robust to resist this effect but still take full damage. The most important factor is not armour so much as method of construction. Tanks and similar military vehicles are built to withstand heavy blasts whereas non-AFVs tend to have points where overpressure can force entry to the hull. If, in the Referee's opinion, a vehicle or structure is sufficiently well constructed that it is largely blast-resistant it can be considered immune to the annihilation effect. Examples include sealed bunkers with good blast doors or ATVs sealed for operations in vacuum.

Superheavy Weapons and Starships

Although immensely potent, superheavy weapons are still intended for use against ground scale targets. They are designed to smash bunkers and annihilate tanks rather than punching holes in a starship's hull. However, because of their power, superheavy weapons will hurt starships more than lesser weaponry.

Normally a ground scale weapon divides damage by 10 when attacking a starship; superheavy weapons divide by five in the annihilation zone, 10 in the primary zone and 20 in the secondary zone.

SUPERHEAVY ARTILLERY WEAPONS

The key factors in determining whether a weapon is considered superheavy or not are the volume and nature of its payload. The calibre of a gun or diameter of a rocket determines the volume of payload to some extent and for various physical reasons the ratio of length to calibre of a rocket or projectile tends to vary only a little. It is theoretically possible to build an extremely long projectile, creating a more destructive weapon in the same calibre, but designers are likely to run into stability problems. Short, fat projectiles are less of a problem but this is likely to reduce range.

In all cases the ratio of propellant to calibre or diameter is a trade-off. Very large artillery rockets require a great deal of propellant to achieve a useful range, using much of the volume gained by increasing diameter; whilst these weapons are extremely potent they do have limitations and are normally used against heavily fortified targets.

Superheavy conventional artillery typically has a calibre of around 300–500mm and usually lacks the range of more conventional pieces. Unguided rocket artillery in the 400mm-plus range will usually be considered superheavy. These also suffer from a reduced range compared to more conventional weapons.

The following examples can be installed in a fortification or aboard a suitable vehicle or vessel.



250MM BOMBARDMENT GUN

Encountered on mid-tech worlds as armament for a warship or a coastal defence weapon, the 250mm gun is the lightest of superheavy weapons. Range is just under 15 kilometres at full elevation using TL5 ammunition but this can be increased by up to 20% if TL7+ ammunition is available, using base-bleed or rocket assistance. Accuracy of such weapons in mid-tech configuration is questionable, so mercenaries who use them will usually opt for guided shells. The basic TL5 version masses 30 tons and consumes 120 Spaces in a vehicle. TL8+ variants bring this down to 25 tons (100 Spaces) and add a three-shot autoloader. This permits four shells to be fired at one-minute intervals, after which each shell takes 1D minutes to load.

The standard version of this gun is typically referred to as a 'naval rifle' for traditional reasons. A long-range variant, with a much longer barrel, is available. In mid-tech societies this would be mounted either as a fortress weapon or railway gun. The barrel must be much thicker to withstand the enormous pressures of firing long-range ammunition but base range is increased to 50 kilometres, plus up to 20% further using advanced munitions. A long version of this sort must be locked down when travelling and requires 2D hours' setup time when in firing position. Rate of fire is one shell every 2D minutes if the weapon is set up with ready ammunition, although much more if the crew have been sloppy or hasty in readying the gun.

Standard shells cost Cr1500, with extended range doubling this cost and guidance adding an additional Cr500. This gives the shell the Smart trait.



250MM BOMBARDMENT GUN

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
250mm Naval Rifle	5	15	2DD	30	MCr0.5	1	Cr1500	Superheavy 10/25/50
250mm Bombardment Gun	8	18	2DD	30	MCr0.75	1	Cr1500	Superheavy 10/25/50
250mm Railway Gun	5	50	2DD	30	MCr3	1	Cr1500	Superheavy 10/25/50

450MM BOMBARDMENT HOWITZER

One of the largest artillery calibres likely to be encountered by mercenaries, the 450 millimetres howitzer is a shortened and lightened version of a mid-tech naval gun. In its form as a maritime weapon the gun is normally turret-mounted in pairs or threes, capable of hitting targets out to 35 kilometres with conventional ammunition. Guns of this sort might be encountered as coastal defence or siege weapons, but difficulties inherent in making such a huge weapon mobile are such that it is impractical for most purposes. However, by TL8 it is possible to create a lighter variant with an autoloader capable of handling its 1,500 kilograms shells.

The 450 millimetres bombardment weapon is a howitzer, with a relatively short barrel which greatly reduces the weight of the weapon but also shortens its effective range. This can be offset by using rocket-assisted or other extended-range ammunition, and it is rare for such a huge weapon not to use guided shells. This gun still masses 125 tons and consumes 500 Spaces aboard a vehicle large enough to carry it. The standard weapon can fire a shot every 3D minutes assuming a standard shell-handling mechanism is in use. The TL8 'mercenary variant' reduces this to 2D minutes per shot.



450MM BOMBARDMENT HOWITZER

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
450mm Naval Rifle	5	35	4DD	150	MCr1.5	1	Cr2500	Superheavy 15/30/75
450mm Bombardment Howitzer	8	24	4DD	125	MCr2	1	Cr2500	Superheavy 15/30/75

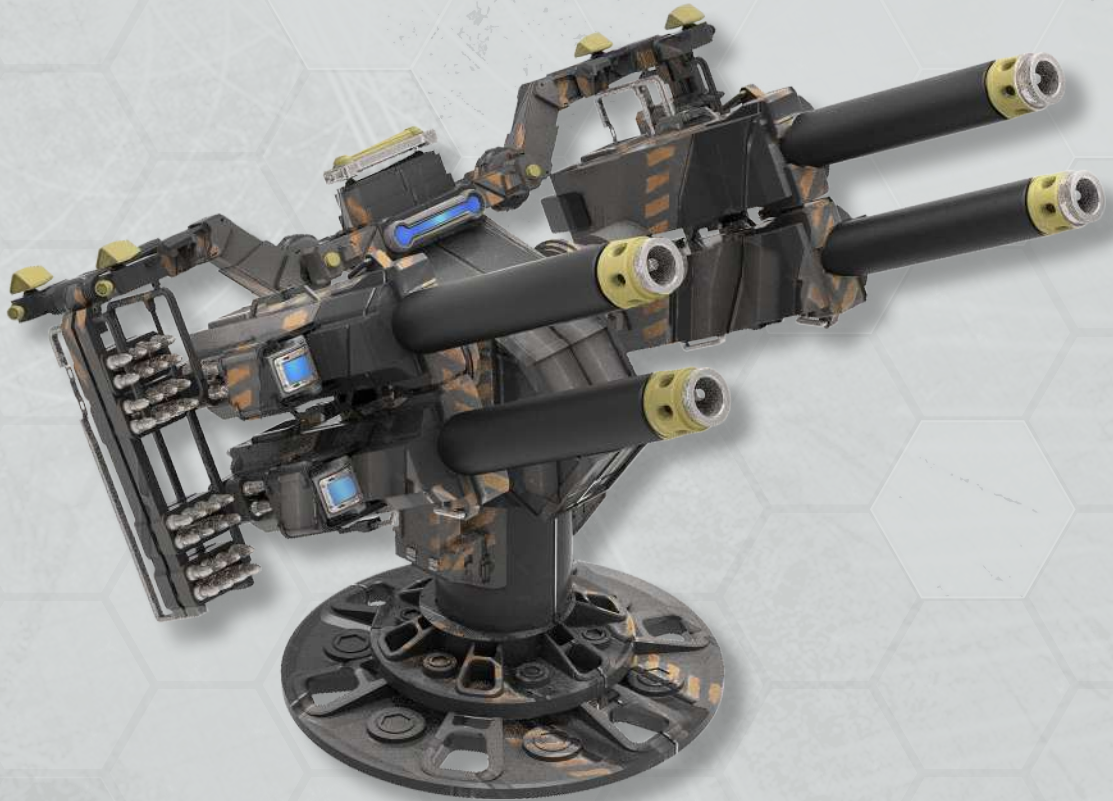
450MM BOMBARDMENT ROCKET SYSTEM

Operated under various designations on many worlds, 450mm rockets are a relatively cheap means of delivering a great deal of explosives onto an area target. The standard mounting carries two rows of two tubes on an unarmoured elevating/traversing platform. Rockets can be launched singly but are more typically ripped in a salvo at the rate of one every five seconds, after which the launching vehicle relocates to avoid counterbattery fire.

Reloading with 300 kilogram rockets using manual power alone is impossible, so the system is delivered with a loading crane as standard. This permits a single rocket tube to be reloaded in 2D minutes by a skilled operator, providing rockets are positioned for easy loading. The whole system, including rockets and reloading crane but no additional ammunition, masses

12 tons and consumes 48 Spaces in a vehicle. A ready-to-reload package of six missiles masses four tons and consumes 16 Spaces, including mountings and ramps to ease use of the crane.

A standard 450mm artillery rocket has a range of 40 kilometres. An extended-range variant with a smaller warhead is available, increasing range to 100 kilometres and an extreme-range version with a range of 200 kilometres is also marketed in small numbers. All variants have a simple guidance system, which will get them into the target area but are considered rockets rather than guided missiles.



450MM BOMBARDMENT ROCKET SYSTEM

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
450mm Bombardment Rocket	8	40	3DD	8	MCr1.5	6	Cr150000	Superheavy 10/20/40
450mm Bombardment Rocket (extended-range)	8	100	2DD	8	MCr1.5	6	Cr180000	Superheavy 7/15/30
450mm Bombardment Rocket (extreme-range)	8	200	1DD	8	MCr1.5	6	Cr240000	Superheavy 4/12/20

AREA DEFENCE PLASMA CANNON

The area defence plasma cannon is designed to make an area untenable for the enemy rather than engaging precise targets. Rather than a single large barrel it consists of eight smaller plasma projectors, each firing on a slightly divergent path from a central spindle. Spread is automatically adjusted for range, giving a wide distribution of plasma explosions in the target area. This is not a long-range weapon but one intended to wipe out an infantry force or light vehicles. The annihilation zone of this weapon is large compared to its area of effect, a result of bracketing plasma explosions around a central point.



AREA DEFENCE PLASMA CANNON

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Area Defence Plasma Cannon	12	5	2DD	2	MCr14	—	—	Superheavy 10/15/25

ANTI-BUNKER MISSILE

Designed to take out hardened structures such as command bunkers, munitions storage areas or missile silos, the anti-bunker missile is designed to penetrate deeply into the ground or through thick concrete before detonating. The warhead is either conventional or fuel-air explosive, which is normally used as an 'agent defeat munition'. Essentially this creates temperatures so high that chemical or biological agents are incinerated. Simply blowing up a bunker full of chemical agents can have disastrous consequences, so agent defeat warheads are desired by participants in 'dirty' conflicts. The missile is large but does not have a particularly long range as it requires a great deal of propellant to drive its heavily armoured warhead. Missiles are normally mounted singly, either in container/launchers on an elevating platform, or on a pylon attached to an aircraft or grav vehicle capable of carrying large missiles. Launch from altitude greatly increases range. A variant is available that can be loaded into a starship's missile racks, which possesses an enormous range if dropped into the upper atmosphere.



ANTI-BUNKER MISSILE

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Anti-Bunker Missile (ground-launched)	9	75	2DD	1.25	MCr1	1	MCr1	AP 70, Superheavy 10/20/30
Anti-Bunker Missile (air-launched)	9	150	2DD	0.5	MCr1	1	MCr1	AP 70, Superheavy 10/20/30
Anti-Bunker Missile (ship-launched)	9	1,000	2DD	0.5	MCr1	1	MCr1	AP 70, Superheavy 10/20/30

BATTLEFIELD MESON GUN

One of the most advanced weapons available, a meson gun does not actually fire mesons – and nor is it, strictly speaking, a gun. It is likely the designation was used as a cover name for what is actually an exotic particle accelerator capable of producing unique effects. The relativistic particles driven by the weapon have almost no interaction with normal matter until they decay into a lower energy state. This takes place microseconds after acceleration but during this time the particles can cover a considerable distance. When the particles decay they begin to interact with any matter they encounter and give off a great deal of their own energy, creating an explosion and radiation burst.

Meson guns can ‘shoot through’ solid matter and their point of decay can be precisely arranged such that they begin to interact with the inside of a vehicle or structure. The results can be catastrophic. Most meson guns are built at the starship level, either as space weapons or emplaced in bunkers deep below the planetary surface as orbital defence weapons. This lighter version is built along similar lines but can

be carried in a large enough vehicle. It requires its own fusion reactor to operate and requires 2D hours to set up after moving. Much of this time is spent ensuring perfect alignment of the accelerating and guidance coils, without which the weapon can be a hazard to all concerned.

A battlefield meson gun ignores all armour on any target it scores a direct hit upon, and by definition anything inside is within the annihilation zone. The only defence is a meson screen, although it is possible to deny the enemy targeting data precise enough to permit a clean strike. Meson detonations outside the armour of a target are treated normally for superheavy weapons, with an annihilation and primary/secondary zones. Likewise, if a detonation occurs inside a target it will be annihilated with normal effect outside unless the target is large enough to encompass the entire annihilation zone and its armour is sufficient to contain the blast. In that rare circumstance the target might survive the internal catastrophe but nothing within it will.



BATTLEFIELD MESON GUN

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Battlefield Meson Gun (emplaced)	13	500	6DD	25	MCr100	—	—	Superheavy 15/25/40
Battlefield Meson Gun (vehicle mounted)	13	500	6DD	25	MCr125	—	—	Superheavy 15/25/40

HEAVY AEROSPACE DEFENCE LASER

Most aerospace defence lasers are designed to tackle grav vehicles and aircraft rather than starships. Generating enough power to operate a weapon potent enough to endanger a starship is something of a challenge. The heavy aerospace defence laser is designed to be mounted on a vehicle and can function as the main weapon of a grav tank or tank destroyer. As a near-instantaneous direct fire weapon, a laser of this sort can eliminate aircraft with ease but is intended to pose at least some threat to

starships. As a non-explosive weapon, the laser does not have the Superheavy trait as it does not have annihilation, primary and secondary zones. A direct hit can be considered an annihilation attack, in that damage is divided by 5 rather than 10 against starships and most lighter targets are likely to be vapourised. A weapon of this sort mounted on an aerospace defence platform is unlikely to be able to engage ground-level targets but a suitable mounting could be built if this capability is desired.



HEAVY AEROSPACE DEFENCE LASER

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Heavy Aerospace Defence Laser	12	150	2DD	30	MCr14	—	—	—

HEAVY MASS DRIVER

Mass drivers use electromagnetic acceleration rather than chemical propellants but are otherwise similar to conventional tube artillery. The heavy mass driver, as its name suggests, is comparable to a large maritime gun and might actually be encountered aboard a wet navy ship for shore bombardment purposes. It can be used in a direct fire role, a capability lacking in most conventional large-calibre weapons, but cannot traverse fast enough to track highly mobile targets.

The heavy mass driver has a range of 60 kilometres using its standard ammunition, which includes range-extending technology and a basic guidance system. A variant optimised for range rather than hitting power is available, which uses a discarding-sabot system to attain even higher velocities. Maximum range is increased to 110 kilometres.



HEAVY MASS DRIVER

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Heavy Mass Driver	12	60	5DD	35	MCr4	1	Cr1000	Superheavy 20/50/80
Extended-Range Mass Driver	12	110	2DD	35	MCr5	1	Cr1000	Superheavy 5/20/50

Impact Points

Superheavy weapons use a modified version of the hits and near misses rules found on page 12 of the *Field Catalogue*.

Roll 2D if a 'hit' is scored. On 12+ the target has suffered a direct hit. This does not double damage as with conventional artillery but allows the AP value of the warhead to be applied. On 10–11 the weapon's impact point is close enough to place the target in the annihilation zone. On 6–9 the impact is within the primary blast zone and 3–5 indicates the target is in the secondary blast zone. On 2 or less the weapon fails to have any effect for some reason – a dud shell, misaligned detonator or some other circumstance prevents the weapon from having the desired effect.

The Referee may apply a negative DM to this roll if the weapon is unreliable for some reason. Those cheap nuclear shells might not be in perfect condition...

Hits and Near Misses

2D	Effect
12 or more	Direct Hit – apply AP
10–11	Annihilation Zone
6–9	Primary Radius, full damage
3–5	Secondary Radius, half damage
2 or less	No damage

Bunker-Busters and Anti-Starship Munitions

A direct hit on a starship, with the projectile aligned correctly to penetrate the hull, is highly unlikely with most superheavy weapons. Even if a hit is scored, most commonly the angle will be poor and the warhead will detonate outside armour. The same applies to heavily reinforced structures such as bunkers. However, it is possible to build shells and missile warheads designed to achieve a penetrating hit. Some form of terminal guidance is necessary, otherwise a hit will be a matter of blind luck.

Anti-starship munitions and bunker-busters are designed to penetrate before detonating, constructed from hard, strong materials to protect the warhead until detonation occurs. Bunker-busting/anti-starship munitions cost 10 times the usual price for a munition of the type and gain an AP value equal to the average damage done by the weapon; so, a 2DD weapon gains AP 70. Munitions of this type also include a terminal guidance package. If this can function without interference it increases the chances of a direct hit. If the guidance system is jammed or blinded by concealment measures, a direct hit allows the weapon's AP score to be used. Otherwise damage is applied as normal without AP.

Point Defence

Point defence or area defence capability can be assigned to any suitable weapon by the referee. To be capable of point defence against missiles or smaller targets a weapon will normally need to be capable of delivering rapid-fire or very rapid-fire attacks. Small anti-missile missiles can also be used for point defence, or weapons delivering multiple projectiles in the manner of a very large shotgun cartridge. Point defence against aircraft can be accomplished by a weapon with a lower rate of fire such as an autocannon or battery of medium-calibre weapons.

Huge artillery shells pose a problem for point defence systems as they are very solidly constructed to survive the pressures of the firing chamber and may be armoured to penetrate the target before detonating. Missiles and rockets are more lightly built but can still take some stopping. To be defeated, incoming munitions must receive sufficient damage from any combination of point defence systems. This means that vehicles with multiple interlocking defence systems may be able to chew even a heavy shell out of the air.

Missiles and rockets have three hits and one point of armour for every 1DD damage they deliver. Artillery shells have six hits and two points of armour for every 1DD damage they deliver.

Armour is tripled if the weapon is an anti-starship or bunker-buster type.

Example: Railway Gun vs. Small Starship

The mercenaries are receiving supplies in their forward base from a chartered free trader. Their TL5 enemies are aware of this and have been waiting for the ship to land in the hope of taking it out with a 250mm railway gun positioned many kilometres behind the combat area. When their forward scouts indicate the ship is on approach, the gun moves into firing position and sends its first huge shell shrieking through the stratosphere. The next will be on its way in 2D minutes.

The shell is easy enough to detect but the TL8 minigun point defence system protecting the mercenaries' base is not up to the task of stopping it. The shell has 12 hits, due to its 2DD damage rating, and four points of armour. Average damage for the point defence system is seven, requiring four successful hits – and there is only time for one. The mercenaries will need to beef up their defences if they want to be immune to this kind of attack.

The shell is on target but this does not equate to a direct hit. Consulting the Hits and Near Misses table on page 12 of the *Field Catalogue*, the Referee rolls 11 – almost but not quite a direct hit on the ship. For a normal artillery weapon this would equate to a primary

zone detonation but this is a 250mm railway gun shell. It buries itself in the ground right next to the ship, detonating with a 10 metres annihilation radius. Anyone in that area is just gone. Up to 25 metres out from this point, damage is 2DD, then 1DD to 50 metres. This is a catastrophic occurrence for personnel and light vehicles. As for the ship, it takes 2DD divided by five as it is in the annihilation radius. The Referee rolls a 6, for 60 base damage. The free trader takes 12 points of hull damage and is shoved sideways by the blast.

The mercenaries need to do something about that gun, quickly. The chances of another detonation at such close range are relatively low but it is not a chance the mercenaries can take.

Nuclear Weapons and Exotics

Nuclear weapons can be constructed in various sizes, from a 0.01kt yield (equivalent to 10 tons of dynamite all going off at once) to 100 megatons and more – 100 million tons of dynamite. The larger nuclear weapons are beyond the realm of superheavy battlefield weapons; they are strategic devices intended to level a city or crack open the deepest bunker. Tactical warheads are usually constructed in a manner that allows them to be delivered in various ways – typically missiles, artillery shells and demolition charges but also depth charges, torpedoes and various one-off methods.

A nuclear detonation will produce a thermal flash that can start fires at considerable distances, a burst of ionising radiation and a blast effect. These are accompanied by an electromagnetic pulse that can disable unshielded electronics. Blast effects only occur where there is an

atmosphere to transmit the energy and in such a situation a blast wave rushes out from the explosion, followed by a less powerful inrush to replace the expelled air. This, combined with a rising plume of heated air (or other atmospheric gas) creates the characteristic mushroom cloud. Any explosion can cause such a cloud but without the intense heat and power of a nuclear detonation most are too small to be of any note. The rising plume of heated air draws dust and debris particles up, which are irradiated in the process. These drop as radioactive fallout wherever wind patterns take them.

Other methods of producing a very large explosion appear at high Tech Levels. High-yield plasma warheads can achieve an equivalent level of destruction with less radiation and no electromagnetic pulse. There is still a burst of radiation from a plasma detonation of this size but the degree of fallout is vastly lower. Plasma warheads are, however, more expensive than an equivalently sized nuclear device. Their use falls into a grey area in military legislation, since they are definitely weapons of mass destruction but not as toxic as nukes. In some localities superheavy plasma weapons are acceptable; in others they are every bit as illegal as tactical nuclear warheads.

At very high Tech Levels, antimatter becomes a possibility as a superheavy warhead. Antimatter is relatively clean, although there is still a pulse of ionising radiation. Antimatter weapons are highly unlikely to be available as mass-produced items, unless very advanced societies are present and their munitions stores remain intact. A crude antimatter bomb could be produced with the right equipment but this would be as much science project as weapon and might not be reliable.



TACTICAL NUCLEAR WARHEAD, LIGHT

The smallest nuclear device normally available, a small warhead can be installed in an artillery shell or rocket/missile payload bay of calibre 150mm or above. It can also be configured as a guided or unguided bomb to be dropped from an aircraft or as an emplaced charge. Yield is preconfigured at 0.02kt, considered sufficient to deal with almost any target yet unlikely to result in escalation to larger nuclear weapons. It is questionable whether an opponent with more powerful nukes would choose not to retaliate in kind but the idea of non-escalation lies at the heart of many militaries' nuclear strategy.

One of the weapons specifically created to use this warhead is the Lightweight Battlefield Nuclear Delivery System, more commonly known as LIBANDS and less formally as a 'nuker-bazooka'. Such weapons are difficult to obtain on the open market and viewed with disdain by many professional soldiers as their lethal radius is not much less than the weapon's delivery

range. The weapon itself consists of a disposable container/launcher and tripod, which can be fitted to a light vehicle. Range at maximum elevation is 4 kilometres, and accuracy is laughable – not that this is much of an issue with a nuclear warhead. DM-2 applies to all attack rolls.



TACTICAL NUCLEAR WARHEAD, LIGHT

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Tactical Nuclear Warhead	7	Varies	6DD	0.025	MCr1	—	—	Superheavy 20/500/2500
LIBANDS	7	Varies	6DD	0.025	MCr1.1	—	—	Superheavy 20/500/2500

TACTICAL NUCLEAR WEAPON, STANDARD

The standard warheads used in tactical missiles and as artillery projectiles can be configured to give a yield between 0.1 and 0.5 kilotons. They require a weapon of 150mm calibre or larger to fire them and must be configured to the delivery system beforehand. Tac nukes are difficult to obtain and permission to use one is unlikely to be granted, so most mercenary formations have no contact with these weapons. However, a few specialist units exist specifically to grant nuclear capability to clients who feel they need it.



TACTICAL NUCLEAR WEAPON, STANDARD

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Tactical Nuclear Warhead, 0.1kt	8	Varies	8DD	0.05	MCr3	—	—	Superheavy 40/1000/3000
Tactical Nuclear Warhead, 0.5kt	8	Varies	10DD	0.05	MCr3	—	—	Superheavy 50/1200/3500

TACTICAL PLASMA WEAPON

Tactical Plasma Weapons, or TPWs, are expensive but extremely destructive. A standard warhead can be configured for use in an artillery or missile system with a calibre of 150mm or above. Their main advantage over nuclear munitions is lack of fallout and smaller chance

of escalation or political complications. This varies but most governments consider the long-term effects of nuclear weapons to place them in a different class to the merely super-destructive plasma warheads that will eventually supplant them.



TACTICAL PLASMA WEAPON

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Tactical Plasma Weapon	12	Varies	10DD	0.04	MCr5	—	—	Superheavy 60/500/1000

HYPERVELOCITY CANNON, QS-20

The QS-20 is a standard hypervelocity cannon using electromagnetic propulsion to accelerate a projectile to incredible velocities. Although normally considered a vehicular weapon, the QS-20 can be encountered as an orbital defence gun, capable of hitting targets at altitudes of up to 100 kilometres. In ground combat it is limited to line of sight, which is typically less than five kilometres. Weapons of this sort are deadly to high-flying grav vehicles, forcing even heavy tanks to fly low and use terrain for cover.

The standard projectile for this weapon is a long 20mm penetrator designed for punching holes in armoured targets. It is not particularly useful against infantry, although a creative gunner can fire into nearby rocks or buildings to hurl debris at an infantry force. The QS designation refers to a special capability that sets this weapon apart from similar

hypervelocity cannons. It is capable of firing the blandly named 'special munition, small-calibre' or SMS.

Probably the smallest nuclear weapon available, SMS projectiles are strictly controlled and issued only under the most desperate circumstances. They are the province of major militaries; mercenaries are unlikely to be able to legally obtain any. Instead of the armoured penetrator these rounds carry a quantity of nuclear material sufficient to generate a small explosion when the containment vessels are smashed together by the force of impact. 'Small' is of course by nuclear detonation standards. The armour-piercing capability of the penetrator is greatly reduced but if it breaches armour the nuclear material will detonate inside a tank. Even if a surface detonation takes place the effects are still spectacular.



HYPERVELOCITY CANNON, QS-20

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
QS-20 (penetrator)	13	5/100	2DD	20	MCr35	50	Cr5000	AP 30, Scope
QS-20 (SMS)	13	5/100	6DD	20	MCr35	50	Cr750000	AP 30, Scope, Radiation, Superheavy 5/10/20

Nuclear Dampers and Meson Screens

It is quite difficult to cause a nuclear explosion. If a critical mass of suitable materials is brought together, or released from containment, it will begin to react. It will produce a great deal of heat and radiation but it will not explode unless the circumstances are right. An uncontrolled nuclear fission reaction going on nearby is certainly a problem but it will not cause instant annihilation. Nuclear dampers interfere with the reactions between particles in a warhead, slowing down the reaction to the point where it will not cause an explosion and controlling the decay of nuclear materials inside. As a result a warhead that is successfully damped will not detonate but the conventional components of the warhead will still operate.

The result is an activated nuclear pile of supercritical mass that must be disposed of in some manner. Left alone, the device will gradually get hotter until it destroys its casing. Active dampers will slow the nuclear decay process to the point where the casing is not breached but removing the damping field before the reaction has run its course allows the runaway reaction to begin again. A warhead that has been prevented from exploding but not further damped will normally breach its casing in 1D hours. A damped warhead will take 4D days to decay to the point where it is safe to handle. Commonly, warheads are removed and made safe by specialist engineering troops. A damped warhead cannot simply be re-used but some of its fissile materials can be salvaged with the correct equipment.

A breached warhead exposes hot, radioactive, highly toxic materials to the surrounding environment and can contaminate an area for years, decades or longer. A nuclear damper can be used to bring the chain reaction under control, at which point the materials will start to cool but they must still be removed and made safe. Whilst not glamorous, this task can be extremely important and might be the basis for a 'white hat' mercenary campaign. The Travellers might be hired to provide security for the clean-up teams or go from war zone to war zone clearing up the mess and making the land liveable once more.

A nuclear damper reduces the damage of a nuclear weapon by 2DD at ground scale (2D at spacecraft scale) and removes the Radiation trait. Multiple dampers can be used against a single attack. The damping effect is not a passive wall but directed against the threat by the damper's automatic guidance system. An operator selects which threats to apply the damper against, after which its function is automatic. Each damper can be directed against one nuclear threat per round.

Just as nuclear dampers are the only effective defence against atomic weapons, a meson gun can be defeated by meson screening. A meson screen surrounds the protected area and prevents the particle stream entering, although it also blocks the stream from proceeding onwards. No other force or object can do so, as particles move through matter and vacuum without interacting. When a meson stream strikes a meson screen the precise energy states of the particles are disrupted in a manner that causes them to decay harmlessly. This can produce quite a light show, often accompanied by low-level radio-frequency emissions, so it is possible for an electronic warfare unit to locate a meson screen by triangulating emissions as it protects against meson gun fire. Meson screens are passive in effect, englobing their emitters without any need to do more than switch the screen on or off.

Biological and Chemical Weapons

Collectively known as biochem weapons, these agents have a number of uses and are generally viewed with distaste – at least – by the majority of soldiers. The difference between a biological and chemical agent lies in the way they work. A biological agent is alive and will harm targets by biological processes, normally along the lines of a weaponised disease spread from one person to another. Viruses, bacteria and the spores of toxic fungi are all used in biological warfare. Biological agents do not usually live long outside a host but can spread from the original point of infection to affect a vastly larger population than was intended. Chemical agents, on the other hand, are incapable of replicating themselves but can persist in an area for long periods unless successfully decontaminated.

Biological agents are for the most part slow to take effect and therefore more useful – to those willing to deploy such horrific weapons – as a strategic gambit. In this regard a lethal agent is less useful than a debilitating but survivable one, as sick personnel and civilians absorb resources caring for them. A debilitating but not-usually-fatal disease can be used as a covert weapon. For example, introducing such an agent into the housing complex around a system base could result in many system defence boat crews being too sick for duty, reducing security around the installation without necessarily making the authorities suspect an attack. This could be used to reduce readiness in advance of an assault or facilitate the movement of people or objects into the vicinity of the base for other purposes.

There are always exceptions but as a rule if an immediate result is desired, or the intent is to make an area untenable for enemy personnel, chemical weapons will be used rather than biological ones. The prospect of starting a plague is repugnant to most militaries, although some particularly nasty regimes or insurgent groups might actually relish the idea. Chemical weapons are for the most part vastly more predictable than biological agents and in some cases may be considered legal under the laws of war, where biological agents are typically considered the worst form of atrocity.

Chemical agents range from debilitating gases such as tear gas, which are usually acceptable for military use, through slow-acting lethal agents such as chlorine and phosgene to nerve agents and similar toxins, which are often quickly fatal. Poisoned projectiles are also a form of biochemical warfare but may be considered legal in some localities as they are not weapons of mass destruction.

Contact with relatively crude agents such as lewisite (mustard gas) can cause blistering on exposed skin and will irritate the respiratory system if inhaled. This can lead to a slow death from lung damage but it is possible to survive contact with many agents by covering as much skin as possible and escaping from the affected area quickly. Any form of breathing protection will assist but a respirator alone cannot prevent the skin effects – for this a sealed suit is necessary.

Even lethal agents are not necessarily fatal. Nerve agents can be absorbed through the skin but are much more likely to be fatal if inhaled. They interfere with the function of the nervous system, causing convulsions and overheating in the body which can be quickly fatal if not treated. Most nerve agents are highly volatile, and are delivered as a liquid which rapidly becomes a spreading cloud of gas. This permits the agent to quickly fill an area but it is unlikely to persist for long. Persistent nerve agents do exist but are difficult to produce.

A biochem detector is a standard piece of equipment for most military forces that possesses or can obtain the technology. Detectors are usually capable of detecting harmful agents in low concentrations and can warn their users before a harmful dose is absorbed. Biological agents are harder to detect and identify; another reason why mercenaries dislike them.

To detect a chemical agent in time to take protective action using a biochem detector, chemsniffer or similar device requires an Average (8+) Electronics (sensors) check with DM+1 for every Tech Level above 6 of the detecting device. Biological agents require a Difficult

(10+) check with the same DM. In many cases the presence of something dangerous – such as a brown-green cloud of oily smoke rolling across the battlefield – is a clue few soldiers will ignore. Some unusual agents may be harder to detect, but the scientific effort required to develop an agent capable of defeating a standard detector is not deemed worth the effort by most users.

Chemical agents are sometimes used for what might termed 'strategic debilitation'. By delivering large quantities of persistent agents into an area, positions and installations can become untenable. This may prevent an enemy from occupying good defensive terrain or using forward bases. Biochem weapons are also used to create secondary effects. For example, a credible threat of chemical attack may be used to drive away a civilian population, jamming roads and presenting the enemy with a humanitarian problem as well as a military one.

Protective equipment of a sealed suit (or sealed vehicle) sort allows troops to operate in a contaminated area, but they will come into contact with the agents – or bring others into contact with them – if they are not properly decontaminated upon return to a safe area. Usually it is enough to clean off agents and disperse them so they are no longer present in harmful quantities. Detergents and ultraviolet light can be used to kill biological contamination, along with specific counteragents.

Any time a Traveller takes damage that is not wholly negated by their armour there is a chance they will be intoxicated or infected by any biochem agents present. The Referee may rule that no chance of contact exists if appropriate, such as when a Traveller is hit by a blunt object. Otherwise, the Traveller will be exposed, probably over a small area. An Average (8+) END check is normally sufficient to avoid intoxication, unless the agent is particularly virulent. This is subject to a positive DM equal to +1 for every TL above 8 of the Traveller's protective equipment since sealing and counteragent linings are standard in more advanced personal protection. A successful Medic check is required to clean and neutralise any agent that has entered a wound. The process will be unpleasant in the extreme for the subject but it may save their life.

Biochem warfare is likely to be the backdrop rather than focus of a mercenary campaign, although sometimes conflict will occur in areas where there are natural biochem hazards such as tainted atmospheres or invasive spores from the local wildlife. Biochem weapons can be used as a plot device or the focus of a

mission. For example, the Travellers might be hired to eliminate the stockpile of biochem agents held by a rival power or an insurgent group, or find proof they exist. The Travellers might be the only force capable of operating in a contaminated area, enabling them to approach an installation from an unexpected direction. They might also be hired for a mission somewhere toxic, fighting in a particularly hazardous region for increased payment.

Heavy Bombardment Battery (TL12)

Despite describing itself as a battery, the unit actually only has one primary weapon, a 35-ton heavy mass driver mounted on a traversing platform, which in turn is carried by four independently steered tracked vehicles. Manoeuvring this monstrosity is made a little easier by extensive automation, with driver and co-driver riding in separate cabs at opposite ends of the main hull. In theory, the weapon can be driven in either direction with equal facility, although its balance makes forward motion less challenging.

The firing crew have a separate control station under the main hull, protected by the bulk of the weapon, whilst the gun itself is fed by an autoloader stowed at the rear of the main hull. Loading requires returning the weapon to a central position, slowing rate of fire to one shot every 10–15 minutes. However, the 300mm projectiles lobbed by the mass driver are enormously destructive even when using conventional ammunition. Penetrator (bunker-buster) rounds are available and if the client authorises it the gun can deliver a tactical nuclear device nearly 200km using a rocket-assisted shell.

The main vehicle is protected by a point defence system and requires a crew of only four personnel. However, its maintenance and field engineering contingent numbers 12 more, riding in two wheeled APCs. Two more, equipped with aerospace defence systems, carry the unit's 16-strong security contingent. There are two more vehicles; an APC converted to a headquarters role and a wheeled armoured car the unit acquired somewhere, which is normally used as a local security asset.

In all, the 'battery' consists of one huge mass driver on an oversized mobility platform, five APCs and an armoured car, with a total personnel contingent of around 30–34 depending on perceived security needs.

AEROSPACE DEFENCE SPECIALISTS

As the name suggests, aerospace defence units specialise in defending against grav vehicles and aircraft, missiles and other above-the-ground threats. These units are distinct from aerospace formations,

which operate flying vehicles of some kind. Heavier aerospace defence formations may provide protection against orbital bombardment or direct assault onto an installation from orbit. As such they are among the most important of all ground-based combat assets but they require ground-level security or a position well back from the combat zone.

An aerospace defence unit must possess a significant amount of equipment suitable to this role. Tactical aerospace defence units might use nothing more potent than shoulder-fired missile launchers but typically a force will have emplaced or vehicle-mounted weapons ranging from autocannon and light lasers to medium-range missile systems. Heavy aerospace defence units are strategic assets rather than tactical ones. Where a light or medium unit might be attached to a ground force or sited to protect artillery or command elements, a heavy unit is more likely to be thoroughly dug in at a position where it can protect a city, starport or similarly important installation. Armament will typically include long-range aerospace defence weapons such as missiles or laser cannon, with medium and short-range weapons to defend the installation against additional threats.

Aerospace defence is usually constructed in one or more layers. Point defence, also referred to as close-in aerospace defence, protects the immediate area around a target and can possibly engage threats passing overhead. The term 'point defence' has come to imply at least some capability against missiles as well as aircraft, so units without this capability are normally referred to as tactical aerospace defence formations. Area defence covers a wider area and will be able to engage threats passing by to the limit of its engagement envelope. Area defence uses medium-range weapons including missiles, lasers and large-calibre autocannon or medium high-velocity cannon. Long-range air defence can dominate a wide area but can generally only engage large targets such as spacecraft and heavy bombers. Orbital aerospace defence units can engage targets in orbit using very large missiles or ground-based direct fire weapons.

It is rare for a long-range or orbital defence unit not to be protected by point defence and perhaps area defence units, which not only prevent the installation or unit from being taken out by fast-moving tactical platforms but create a layered set of defences around a critical installation. For example, orbital threats can be kept away from a starport by a suitably powerful set of ground-based missile launchers but a flight of grav speeders could fly right through the engagement envelope without much chance of being hit. These would be engaged by area aerospace defence systems, with 'leakers' that get through stopped by the point defence component of the layered defence system.

Tactical Aerospace Defence Units are typically small infantry detachments with crew-served missile launchers. They provide a measure of short-range defence against air attack but cannot intercept missiles. They are hired at the normal rate for specialists.

Point Defence Units typically use a mix of short-range missile launchers, autocannon or light lasers and point defence systems, all of which may be mounted on a vehicle or ground-based platform. Point defence units have only a slightly larger defensive envelope than tactical formations but use more effective weapons and can intercept missiles. They will be hired at the normal rate for artillery troops.

Area Defence Units will usually have a primary armament of medium-range weapons with a contingent of short-range and point defence systems for self-defence. They are hired at the normal rate for an artillery force of their size.

Long-Range Aerospace Defence Units typically have a primary armament of long-range missiles or heavy direct fire weapons plus some close-in and point defence weapons. They are hired for 50% more than the standard fee for an artillery unit of their size.

Orbital Aerospace Defence Units are built around one, or more, orbital defence weapon and usually have a small point defence contingent. They are hired for double the standard fee for an artillery unit of their size.

Aerospace Defence Specialists

To qualify as an aerospace defence specialist unit, a formation must meet both of the following criteria:

Weaponry: At least 75% of the unit's personnel must be equipped with or form part of the crew of aerospace defence weapon systems. A missile launcher operated by a three-soldier team counts as three personnel armed with that weapon.

Skills: The unit's personnel must possess above-average skills with its primary weapons. This translates to an overall skill level of 2+ among those who fire or guide the weapons, with an equivalent skill level in Electronics (sensors) or Recon among those who command or provide information to them.



VIXEN-ADV AEROSPACE DEFENCE VEHICLE

The Vixen is a light armoured vehicle intended to serve in a variety of roles. It was primarily created as a platform for air defence weapons but has been converted to a tank destroyer and an armoured reconnaissance vehicle among other uses. The low, tracked chassis has a light dozer blade at each end, enabling the vehicle to create a flattened area for firing or to plough itself a protective mound of earth. The blade is not suitable for major construction or demolition work but will pile up normal earth well enough.

The chassis is topped by a large turret with a very pronounced bustle, atop which stands a sits turret. Both are remotely controlled from within the main hull; there is no room for personnel in either and reloading is done externally. The upper surface of these turrets are heavily armoured, since the primary threat to aerospace defence vehicles comes from above. Underside protection is light but adequate for such a vehicle.

The small turret contains a twin minigun missile defence system, fitted as standard to all vehicles and equipped with a dedicated fire control system. Some of the workings of these weapons – ammunition, rotation and elevation mechanisms and the like – are contained within the main turret, taking up 2 Spaces. This leaves room for 8 Spaces of weapons inside the turret, which additionally has two hardpoints on each side. These are not protected by armour but can carry a medium-range anti-aerospace missile or two light anti-aerospace missiles each.

Standard loadout for the turret is a quad-mounted AC-40 medium autocannon, included in the cost of the vehicle below, with two medium and four light missiles that are also included. These can be substituted for other light and medium missiles but the mountings are not large enough to accommodate heavier missiles. The cannon are 'harmonised' to increase the chances of a hit rather than increasing damage. Attack rolls with this quad-mounted weapon gain DM+3.

Although slow, the Vixen is capable of accompanying mid-tech armoured forces. It is more commonly assigned as a mobile anti-aerospace platform positioned on the 'threat axis' of likely incoming aerospace vehicles or missiles. It may also be fitted with an all-light missile loadout in order to act as a 'goalkeeper' for an important installation. The firepower afforded by quad 40mm cannon makes the Vixen a potent anti-infantry and anti-light vehicle platform suitable for emergency defence of a larger weapon system.

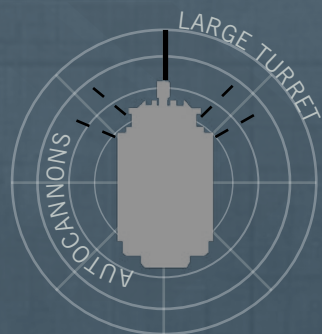
Laser-Armed Variant

The Vixen is constructed at TL8 but a modularised TL9 light laser cannon is available to replace the quad autocannon. This reduces cost by Cr40000 but is otherwise no different to the standard version. The laser is less likely to hit a fast-moving target but delivers similar damage and does not need reloading.



ARMOUR

FRONT	18
REAR	18
SIDES	18
TOP	27



VIXEN-ADV AEROSPACE DEFENCE VEHICLE

Autopilot (skill level)	0	TL	8
Communications (range)	500 km	SKILL	DRIVE (TRACKED)
Navigation (Navigation DM)	+1	AGILITY	-1
Sensors (Electronics (sensors) DM)	+0	SPEED (CRUISE)	SLOW (VERY SLOW)
Camouflage (Recon DM)	-2	RANGE (CRUISE)	400 (600)
Stealth (Electronics (sensors) DM)	—	CREW	3
		PASSENGERS	—
		CARGO	1 TON
		HULL	90
		SHIPPING	15
		COST	MCR1.326

TRAITS

AFV

EQUIPMENT

Autopilot (basic), Anti-Missile Systems (minigun) x2, Control Systems (improved), Communication System (improved, encrypted), Decoy Dispenser, Dozer Blade (light), Fire Extinguishers, Navigation System (basic), Sensors (improved)

WEAPONS

Large Turret (AC-40 autocannons x4)
Hardpoints x2

WEAPONS

WEAPON	TL	RANGE	DAMAGE	COST	MAGAZINE	MAGAZINE COST	TRAITS	FIRE CONTROL
Quad AC-40 (HEDP)	8	10	9D	CR100000	100	CR9000	AP 3, Auto 3, Blast 6	+1
Light Laser Cannon	9	2	8D	CR60000	—	—	AP 5	+1
Anti-Air Missile	7	8	8D	CR12000	—	—	One-Use, Smart	—
Light Anti-Air Missile	7	5	6D	CR5000	1	—	One-Use, Smart	—

PLANETARY AEROSPACE DEFENCE MISSILE

Planetary Aerospace Defence (PAD) missiles are built along the same dimensions as starship missiles but sacrifice warhead space for additional boosters, enabling the weapon to climb quickly to orbit. If launched from a planet of Size 5+, a PAD missile cannot engage beyond high orbit. Standard anti-ship missiles can hit orbital targets from the surface of a Size 2–4 planet; lesser gravity will not affect the range of missile to a significant degree, so standard missiles are normally used.

A PAD missile can be launched from any standard missile rack or bay, though cost and reduced warhead size makes them undesirable for spacecraft and orbital installations. One ton or 4 Spaces hold 12 missiles as reloads. Damage is at spacecraft scale.

These missiles can be mounted aboard a vehicle or held ready on a launch rack. For protection, they are often moved on mobile launchers or sunk into pits. In

all cases the weapon is carried in a one-use container-launcher. Reloading requires lifting the expended container out of its mounts and replacing it with a loaded one, a process that takes about an hour for a skilled team with a handling hoist, plus however long it takes to reach a remote site. PAD missiles defending an installation are normally sited a few kilometres away and well dispersed, to prevent an enemy eliminating the weapons with a concentrated strike and perhaps damaging the installation.

PAD missiles mounted in this way take up much more space than those launched from a missile rack. They can be launched singly or in a salvo of any size up to the entire available stock, which creates the ability to sucker punch invasion ships. However, any power that can afford so many container-launchers is more likely to build a defence complex with launchers atop heavily reinforced bunkers, creating a more flexible and survivable missile capability for the same cost.

Weapon	TL	Range	Power	Damage	Cost	Traits
PAD Missile	Orbital	10	0	3D	Cr250000	Smart



PLANETARY AEROSPACE DEFENCE MISSILE

Weapon	TL	Range	Damage	Magazine	Tons	Spaces	Cost	Magazine Cost	Traits
PAD Missile (container launched)	10	Orbital	3D	—	1	4	Cr300000	—	One-Use, Smart

A variant of the Vixen ADV, designated Orbital Defence Vehicle (ODV) is available. This version is based on the laser-armed version and replaces the turret-side missile hardpoints with container-launchers for two PAD missiles. A Vixen ODV costs MCr1.842 with two missiles. The containers are notoriously hard to replace

without a proper reloading facility but the ability of the vehicle to move between concealed launching points is considered useful by many operators. Mercenary orbital defence formations are uncommon but occasionally formed around one or two of these vehicles plus security troops and a short-range aerospace defence contingent.

C H A P T E R - F I V E

PROTECTED FORCES

Protected forces, or ProtFors, is the generic term for troops trained and equipped to fight in hazardous environments. This normally means vacuum or a hostile atmosphere but contaminated battlefields are equally dangerous and require similar protective equipment. The term has been expanded to include armoured infantry forces such as units equipped with combat armour, even if they are optimised for combat in a conventional environment.

ARMoured INFANTRY FORMATIONS

The term 'armoured infantry' is sometimes applied to conventional infantry formations, which include a higher proportion of armoured vehicles than usual, especially tanks. However, since the development of full-suit personal protection such as combat armour and battle dress the term has generally shifted in meaning. Today, an armoured infantry formation is largely or exclusively outfitted with combat armour and/or battle dress or equivalent powered personal combat systems.

Armoured infantry offers significant advantages on the battlefield, most notably the ability to take vehicle-grade firepower into places a vehicle cannot go and provide virtual invulnerability to the threats that cause most battlefield casualties – shell fragments and small arms fire. However this comes at a price. Personal armour costs a lot to buy, if it can be obtained at all, but the costs are only beginning at this point. The maintenance requirement, even of non-powered armour, is huge and for a unit equipped with battle dress it can be enormous.

Personal protection sufficient to qualify a unit as armoured infantry is always of a full-suit type and includes a self-contained breathing and life support apparatus. A variety of heavy personal armour types and accessories for them are found in the *Central Supply Catalogue*, starting on page 20. These armour systems fall into three categories.

Unpowered Armour is sometimes referred to as 'combat armour', although that term is more commonly reserved for specific subtypes. Unpowered armour includes

heavily armoured space protection such as rescue and boarding suits but not vacc suits. The occasional unit will try to claim the 'armoured infantry' designation by using conventional body armour over an environment suit or a modified vacc suit, however clients are unlikely to be convinced to pay armoured infantry rates.

True combat armour is specifically designed to protect against combat hazards first and foremost rather than being what is essentially environment protection with armour plates. A unit can get away with calling itself armoured infantry if at least 50% of its front line infantry personnel are equipped with combat armour and the rest have some kind of enhanced full-suit protection. This is stretching the point a little but results will justify the designation.

Powered Armour is a range of full-suit personal protection, which may not be any more protective than combat armour but which offers power assistance. Powered armour tends to have limited endurance and is often rather clumsy, although it provides excellent protection as well as the capability to carry heavy weapons. In some cases, very heavy armour is required just to survive, such as in a high-radiation environment, and power assistance is in turn necessary to be able to function usefully. A unit can reasonably call itself a 'powered armour' formation if at least 50% of its front line personnel have powered armour or battle dress and the rest all have full environment protection, such as vacc suits or combat environment suits.

Battle Dress refers to the most advanced personal armour available and has significant advantages over powered armour. Battle dress typically offers better protection whilst being more agile and supporting more and better electronic systems. A unit can reasonably call itself a battle dress formation if at least 50% of its front line infantry personnel are equipped with battle dress and the remainder have powered armour or combat armour. More commonly, a battle dress formation will be small but its fighting and immediate support components will contain 100% battle dress-equipped personnel. Lighter personnel are kept back from the combat area, often aboard a supporting starship.

Armoured Infantry Specialists

To qualify as an armoured infantry unit, a formation must meet the following criteria:

Equipment: At least 50% of the unit's front line troops must be equipped with some form of powered or unpowered armour.

Skills: All full suit-equipped personnel must possess the requisite skill to operate their armour without penalty. This usually means at least Vacc Suit 1.

To qualify as a powered armour formation the unit must meet the following criteria:

Equipment: At least 50% of the unit's front line infantry personnel must be equipped with some form of powered personal armour. All other combat personnel must be equipped with full-suit protection such as (at least) vacc suits.

To qualify as a battle dress formation the unit must meet the following criteria:

Equipment: At least 50% of the unit's front line infantry personnel must be equipped with battle dress. All other combat personnel must be equipped with personal full-suit armour.

Fees for Armoured Infantry Units

Armoured infantry formations command higher fees than standard infantry. A specialist unit, such as combat engineers, that makes extensive use of personal armour would also command the higher fee. This does not apply to units where the primary troop type is artillery, vehicles or another non-infantry type.

Unpowered armoured infantry commands a 25% higher fee than standard infantry.

Powered armoured infantry commands a 75% higher fee than standard infantry.

Battle dress formations command a 100% higher fee than standard infantry.



Front Line Infantry

There are, of course, rarely any 'front lines' in modern warfare but the term is retained in reference to the part of a formation intended to directly engage the enemy. Thus a force calling itself a battle dress formation could be expected to have at least 50% of its primary infantry force equipped in battle dress, with the remainder wearing powered or combat armour. This does not preclude the presence of additional personnel using vacc suits, combat environment suits and even conventional body armour, however these would be supporting troops.

A battle dress formation might include a more lightly equipped electronic warfare component, some close-support technicians and support weapon operators who do not have battle dress and with the right tactics this may not be a liability. However, given the incredible lethality of the environment battle dress is intended for these lightly equipped supporting troops will be annihilated if they come into contact with front line components of an equivalent enemy force. For this reason most supporting troops are equipped with combat armour, at least, and can still be a liability if plans have to be changed to prevent them being taken out by the enemy's battle dress troops.

SUPPORT, LOGISTICS AND COSTS

Armoured infantry is not necessarily more capable than lightly equipped troops but is more survivable and can operate in areas untenable for unarmoured troops, remaining effective for longer. Armoured infantry is all but invulnerable to many battlefield threats such as artillery fragments, most small arms and toxic gases. However, a great deal of support is needed to maintain this level of potency. This is modelled by an abstract value referred to as Support Burden.

Each front line soldier equipped with unpowered armour imposes a Support Burden of 1 on the unit.
Each front line soldier equipped with powered armour imposes a Support Burden of 3 on the unit.
Each front line soldier equipped with battle dress imposes a Support Burden of 6 on the unit.

Meeting Support Requirements

A unit's Support Burden requirements can be fulfilled in a variety of ways, none of them cheap:

Immediate Support is provided by personnel or robots that accompany the armoured infantry and help keep them in action but are not primarily concerned with engaging the enemy.

Field Support is normally provided by a forward support contingent, allowing quick repairs of minor damage or reloading/recharging and a rapid return to the combat area.

Base Support is normally provided by an installation or aboard-ship facility, although some units use maintenance and repair units carried aboard vehicles or deployed on the ground to the rear of the combat area.

Immediate Support: This refers to personnel who remain close to the armoured infantry force's primary fighting assets. Immediate support assets include troops in lesser armour who carry ammunition and powerpacks for weapons, and are trained to swap them in under combat conditions. These include lightly protected scouts, electronic warfare and sensor operators, and fire-support gunners who stay a little back from the heaviest combat and make use of medium-range fire.

Immediate support personnel add to the unit's Support Burden if they wear full-suit armour of any kind. However, they can also alleviate the overall burden. Each immediate support soldier whose primary role is to attend to the requirements of a front line trooper provides two points of Support if they are not an armoured infantry type. This includes personnel equipped with vacc suits supporting a combat armour formation. If the immediate support soldier is in unpowered full suit armour the net result is to provide one point of Support to the front line troops. In order to qualify the immediate support trooper must act only in support of the main force. This does not preclude engaging the enemy directly in self-defence but most of the time the immediate support force will solve problems for the front line infantry. This might mean keeping enterprising enemy infantry from getting close with anti-armour grenades, adding firepower to an attack on an enemy position, replacing a malfunctioning power cell or rushing back to get more ammunition from the ready stocks.

Field Support: This refers to personnel and equipment positioned close to the battle area. Each technician at the field support station provides two points of Support and specific equipment can provide an additional amount.

Base Support: This is personnel and equipment located at a base clear of the combat area but close enough that the formation can access it when not actively engaged. Each technician at a base provides three points of Support to the unit and specific equipment can provide an additional amount.

Most units will have the bulk of support they require at a forward base or aboard a starship, as this is both the safest and most efficient means of supporting an armoured infantry force. However, high-tempo operations will begin to degrade an armoured infantry force as soon as it deploys. Support provided by a base represents long-term maintenance and problem-management. It ceases to count against Support Burden 2D plus the Tech Level of the unit's equipment in hours after the force deploys, as both operational and enemy-induced damage accrue and niggles surface. So long as the force has a clear line of supply to its field supports, these continue to provide support indefinitely. If it is not possible for armoured infantry suit operators or their immediate support troops to move freely between the field support position and the armoured force, field support also ceases to count against Supply Burden after 2D plus the unit's Tech Level in hours.

This creates certain distinct models of armoured infantry operation. The most common used by those with a starship for a base is for the entire Supply Burden to be met by technicians and equipment aboard ship. On average, a force will be back aboard well before sufficient time has elapsed that repairs and corrections are required. This setup is most useful for strike units that will be relieved almost as soon as they have overcome opposition, or forces

that can send some of their number back to base every few hours for new power packs, rearming and any adjustments. A TL12 armoured infantry unit can operate on average for 17–20 hours before maintenance becomes a problem and this is about as long as most operators can stand to be in their suits. Suits that come back to base reset the 'supply clock' after a recalibration and rearmament cycle, which takes 5D+30 minutes.

Units that may have to stay in the field longer usually combine a forward base with a field maintenance unit, which in turn requires its own security element. This may be carried aboard a vehicle or dropped from orbit in a specialised atmospheric entry pod. Formations that operate this way cannot be as 'lean' as a strike-and-return formation but can operate in the field for some time without a full return to base. Such forces often include a security element, which can detach personnel to provide immediate support when needed.

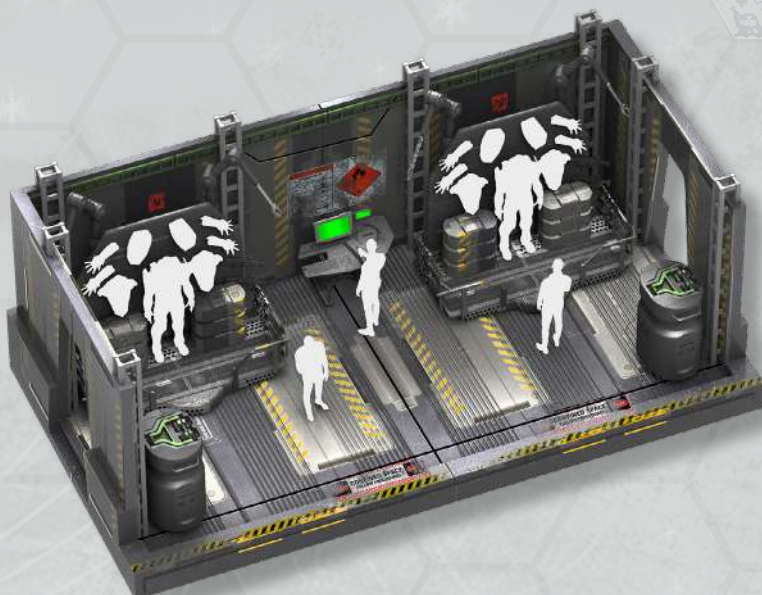
In some small units a handful of battle dress equipped 'knights' are supported by lightly armoured 'squires'. Occasionally a 'knight' will retire to where the support team is taking cover, hunkering down whilst diagnostics are run, components swapped out and ammunition reloaded. 'Squires' might be willing to make the desperate run to a downed battle dress operator in the hope of getting them back into action – or being rewarded with their suit if the operator is permanently out of the fight. Most such units have a base or field support element but it is possible for a small force of battle dress equipped personnel to operate for an extended period without outside support providing each suit has several supporting soldiers.



BASE SUPPORT FACILITY

A base support facility is a spacecraft-scale component displacing 12 tons and costing MCr4. It can be carried aboard a vehicle instead but requires 2D hours to fully deploy all components from their mobile configuration. The facility contains tools and equipment suitable for maintaining armoured infantry and conducting field repairs, and can be used by up to 24 technicians providing there is space for much of the work to spill out from the immediate area around the carrying vehicle. The facility itself provides 24 points towards Supply Burden and aboard a starship can accommodate up to four technicians without need for additional working space. One additional technician can operate for every two tons of space or common areas available, up to the maximum of 24 noted above.

Whether a base support facility counts as base or field support depends on where it is located. One well back from the combat area or aboard an orbiting starship is obviously a base; one close to the combat area is a field facility.



Item	TL	Tons	Cost
Base Support Facility	10	12	MCr4

MAINTENANCE RACK

All properly-equipped armoured infantry formations make use of ready racks for their armour, just as vacc suits are hung ready for use rather than being flung on the airlock floor. A basic rack includes a few necessary tools and testers but is primarily a storage unit and generally comes as standard with a suit of armour. A maintenance rack is much more sophisticated, with a more comprehensive set of tools and monitor, allowing minor repairs and routine maintenance to be performed without need of a full maintenance or support unit. Up to two technicians can use a maintenance rack as an improvised workstation when providing support to an armoured infantry unit.



Item	TL	Kg	Cost
Maintenance Rack	10	20	Cr50000

MAINTENANCE RACK, SMART

A smart rack has more sophisticated electronics than the standard model but there is more to it than this. It is powered and can run a suit through a set of movement-based diagnostics whilst technicians are busy elsewhere. This does not increase the unit's ability to meet its Support Burden but provides DM+2 on attempts to diagnose or repair a problem with any sort of armoured infantry suit and reduces time to put on or take off armour by 25%.

Item	TL	Kg	Cost
Smart Maintenance Rack	12	24	Cr125000



MOBILE SUPPORT UNIT

The MSU takes the form of a small six-wheeled buggy whose sides swing out to reveal a miniature armoured-infantry workshop. The unit is designed to be led rather than driven and will follow an operator or obey basic commands. It is lightly armoured and its internal power cells are the same as those used in most powered armour. There are 28 of them, each capable of providing half the endurance of a suit of battle dress. Recharging can be performed by cable but more commonly a charged cell is removed from the MSU and a partly discharged one swapped in from a suit in need of power. Cells can be drained to fully recharge others, although ultimately the MSU must be recharged from a vehicle or spacecraft power plant. It can alternatively be rigged into the local civilian power supply, trickle-charging its own cells ready to pass them on when needed.

An MSU supported by at least one technician provides six points towards Supply Burden. It permits a total of eight technicians to work simultaneously, using its tools, and carries basic spares and ammunition in addition to power cells.

ROBOT	HITS	SPEED	TL	COST
Mobile Support Unit	30	4m	10	Cr275000
SKILLS	None			
ATTACKS	None			
TRAITS	Armour (+8)			
PROGRAMMING	Minimal			
SHIPPING	0.5 Tons			



Support Deficit

2D+DMs	Status	Effects
0 or less	Unfit for Service	DM-8 in all checks. Breakdown 6+ on 2D.
1	Dangerously Malfunctioning	DM-6 on all checks. Breakdown 8+ on 2D.
2	Malfunctioning	DM-4 on all checks. Breakdown 10+ on 2D.
3-4	Critically Impaired	DM-3 on all checks.
5-6	Seriously Impaired	DM-2 on all checks.
7-8	Impaired	DM-1 on all checks.
9-10	Slightly Impaired	DM-1 on either targeting or mobility related checks .
11 or more	Unpaired	All equipment functions normally.

Support Deficit

A unit unable to fulfil its Support Burden can choose to take one or more armour suits out of service or risk breakdowns in action. If a unit undertakes operations with a support deficit, roll 2D on the Support Deficit table with the following modifiers:

Support is 0-10% below requirements: No DM
 Support is 11-20% below requirements: DM -1
 Support is 21-40% below requirements: DM-2
 Support is 41-60% below requirements: DM-3
 Support is 61-80% below requirements: DM-4
 Support is 81-90% below requirements: DM-5
 Support is 91% or more below requirements: DM-6
 Operation is non-combat mission, such as training or escort not involving contact with hostiles: DM+2

Mobility refers to any activity requiring motion of the whole suit or dextrous motions of a limb, including melee attacks. Targeting refers to all ranged attacks and related actions such as using a laser designator.

If possible breakdowns are indicated, a check should be made at the beginning of the operation. The indicated breakdown or malfunction will manifest at some point, as determined by the Referee. Most impending breakdowns can be predicted using the suit's diagnostics so the user will normally know what is about to fail, if not when. The Referee may decide the failure is gradual or instantaneous. The latter is more likely to occur with high-powered systems when they are first used during the mission or after a small number of uses.

These malfunction and breakdown rules assume a unit small enough to determine the effects on individual suits. For larger armoured infantry formations, the negative DM for insufficient support can be applied to ECEI checks, resulting in a direct reduction in performance.

Powered Armour Breakdowns

2D	Result
2	Critical breakdown. Roll twice more and keep rolling if additional critical breakdowns occur.
3	Power short. The suit loses 2Dx5% of its starting power in a single discharge. Anyone within 2m may be shocked for 2D damage. All electronics are offline for 2D rounds whilst the suit reboots, if it has any power left. Servos will lock in place but unless the suit is perfectly balanced it will fall over. This causes 1D wounds to the occupant.
4	Power bleed. The suit is losing 2D points of power per minute.
5	Communications malfunction. All communications devices are down.
6	Servo control malfunction, imposing an additional DM-2 on all mobility-associated checks.
7	General malfunctions and glitches, imposing an additional DM-1 on all checks.
8	Targeting malfunction, imposing an additional DM-2 on all ranged attack rolls.
9	Weapon malfunction. Primary weapon is out of action.
10	Servo malfunction. Movement speed is halved and all mobility related tasks suffer an additional DM-2.
11	Temporary freeze; the suit locks solid for 2D combat rounds and will probably fall over. Roll 1D: 1-2 this is an isolated incident, 3-4 the freeze will be repeated 1D times, 5-6 the freeze will be repeated at decreasing intervals until the suit is completely disabled.
12	Roll 1D. 1. Targeting 2. Communications 3. Main weapon 4. One limb 5. All electronics except those used for suit control and mobility 6. Entire suit The system affected is completely out of action and beyond repair without access to a workshop

Power

The single greatest limitation on powered armour is the requirement to keep it powered. Battle dress typically has fuel cells capable of keeping the suit operating at full level for 12 hours, whilst other powered armour systems typically have a shorter endurance. This power can be prolonged by shutting down some systems but the greatest drain – other than energy weapon fire – is from servos. Experienced operators learn to operate economically, which typically means smooth and unhurried movements. Even in combat, a good battle dress operator moves with a grace and fluidity that others envy. Routinely moving in this manner decreases power use, adding 10% to the suit's operational duration for every level of Vacc Suit skill. Additional power-saving techniques can be used but they are not suitable for combat.

It is not normally necessary to keep track of the amount of power remaining to an armoured infantry unit. Engagements involving the sort of weapons they carry tend to be rather short and usually power cells can be quick-swapped during a lull in combat. Only the most primitive powered armour suits have a single power source; most have two or more, allowing one to be removed for recharging whilst the suit remains in action or more commonly a fully charged cell will be swapped for a partially depleted one.

If power use becomes a factor, it may be necessary to calculate how much is available. A powered suit uses one point of power per combat round, on average, assuming any energy weapons have their own power source. Typically, weapon powerpacks are geared to short, high-intensity bursts of output and are not compatible with armour unless a converter device is fitted. These tend to be heavy and inefficient, and are rarely used as standard although a clever technician could probably rig something in an emergency. The endurance of a suit's primary power system is determined by multiplying its hours of endurance by 500. In addition, a suit has another 20% of this value available as a reserve. For a standard suit of battle dress this gives a nominal endurance of 10 hours (6,000 combat rounds) on full power and two hours (1,200 combat rounds) on reserve power.

The power available to a specific user is increased by 10% for every level of Vacc Suit skill they possess. Thus a Traveller with Vacc Suit 2 would get 7,200 combat rounds (12 hours) at full effectiveness from a suit of battle dress, plus 1,440 rounds (2.4 hours) on reserve.

Reduced Output Mode: When functioning on reserve power, a suit will automatically switch to a lowered output level, slowing its movements and reducing the use of electronic systems as far as possible. This imposes DM-2 on all physical actions but does not eliminate the increase to

a Traveller's physical capabilities provided by the suit. When operating at a reduced output level the suit uses 25% less power, effectively using up four units of power every five combat rounds. This increases the nominal two hours' reserve to 2.5 hours.

The user can override the reduced output at any time, allowing the suit to operate at full capacity. Reduced output can also be implemented at any time. This is frustrating and tiring for most users, as they find themselves fighting the suit or reacting more slowly than they expect but it is useful in reducing the power used by relatively inexperienced troops or in an emergency. Reduced output makes use of the 'extra' power available to skilled users but is not compatible with other power use reduction techniques.

A much more radical reduction in output is possible. By selecting minimal output mode, the Traveller accepts DM-4 on all actions in return for halving power use. Minimal output mode can be overridden at any time but the suit will require 2D combat rounds to return to full function. This can be reduced by the Effect of a Routine (6+) Vacc Suit check.

Emergency shutdown mode is normally only used in desperate survival situations and may be combined with a dose of Fast drug to keep the user alive as long as possible in the hope of rescue. In shutdown mode the suit turns off everything except minimal life support. This decreases power use to one point per minute, allowing a Traveller to eke out the last of their power for hours or even days. DM-8 applies to all physical actions. Electronics systems and even lights are disabled, leaving only an emergency beacon and low-powered comms channel. The user must manually force the suit to move, bearing its weight and losing any bonuses to STR and DEX.

Drain Control: Drain control techniques do not require any reduction in the suit's level of readiness. The operator is simply careful to keep movements to a minimum and carry them out slowly and smoothly. This is mentally tiring for the user, as it means doing everything in a frustratingly slow manner but it increases suit endurance. Unlike reduced output, which is a setting on the suit, drain control represents the user's careful actions. Drain control can be used over any time period the user wants. At the end of this time period, the user must make an Average (8+) Vacc Suit check. Power used during that period is reduced by the Effect of this check. For example, a Traveller is marching towards a distant objective for an hour, which would normally use up 600 power units. They make their Vacc Suit check with Effect 3+, reducing power use by 30%. Only 420 power has been used.

A negative Effect means normal levels of power have been used but imposes a DM equal to the negative Effect to the operator's Recon checks during the drain control period and any skills used during the first 1D rounds after something requires the Traveller to react. For example, someone trying to reduce power use who suddenly has to react to an incoming attack, will be sluggish (and so will their suit) for the first 1D rounds.

Suit Operations

Once a Traveller is suited up they represent a powerful force on almost any battlefield. However, it is not possible to remain suited all the time. For this reason armoured infantry tend to operate from a base close to the battle area and engage in short-term operations rarely lasting more than a few hours. Sustained operations can be achieved by rotating personnel, which again requires the availability of a nearby base area.

Getting into any full-suit armour is a complex process. It takes 1D+6 minutes to don unpowered armour that has been set up ready, increased to 2D+6 minutes for powered armour. This usually means it is standing on a frame or rack with pieces arranged in the correct order and as many connections as possible already made, although the process can be accomplished as quickly with a skilled assistant holding and passing the necessary items. At this point the suit or armour is ready to go but not ready-tested. Obvious problems will set off alarms or be spotted by a skilled operator's basic checks. A pre-operations diagnostic takes another D3 minutes for unpowered armour and 1D minutes for powered suits.

The overall time to get into armour can be reduced by the Effect of a Routine (6+) Vacc Suit check. A properly trained battle dress operator requires about 15 minutes to fully suit up in a ready set of armour and run pre-operation checklists. It takes at least twice this long to put on a suit that has been dumped on the floor of a ready room or abandoned by a previous operator. Getting out of a suit takes twice as long as donning it, assuming the components are returned to their proper places after inspection for damage. Scrambling out of a suit and leaving it where it falls takes 1D+3 minutes.

These times assume the availability of an assistant who is at least broadly familiar with armoured infantry operations or a robotic equivalent. Some units suit up on a 'buddy' basis, roughly doubling the time taken to become combat ready but requiring a smaller number of assistants. In other cases the setup follows an almost medieval model, with operators-in-training serving as 'squires' to qualified operators before donning their own suits – usually unpowered armour – and following as a support formation.

HIGH ENERGY WEAPONS

The term 'high energy weapons' is applied mostly to plasma and fusion guns, although occasionally an exotic prototype using a different energy delivery system makes a short-lived splash in the technical journals. The generation of super-energised plasma remains the only reliable way to deliver energy at these levels. The principle is not complex, although application requires specialist materials and very precise engineering. A plasma weapon uses liquid hydrogen fuel, much like a spacecraft, which is held in a magnetic containment vessel until ready to launch – a process taking only microseconds. Plasma cannot be held ready using known technology, as the immense electromagnetic fields required can only be maintained for an instant.

The super-energised plasma is released by collapsing the containment field in a controlled manner, allowing the plasma 'bolt' or 'pulse' to exit by way of the weapon's muzzle. Typically described as a bolt, the plasma pulse resembles a comet in some ways. It has a distinct head and a 'tail' and in some cases the two are considered to be a 'plasma stream'. Attempts to elongate the tail to create a stream that can be played over an area target have not been successful, although the catastrophic release of energy when the plasma bolt arrives is sufficient to create a significant danger space.

Fusion guns contain the plasma a few nanoseconds longer and elevate its energy state still further, to the point where the plasma bolt proceeds to nuclear fusion as it travels to the target. One side-effect of this is the creation of ionising radiation as the fusion bolt leaves the weapon. A properly made fusion gun's containment system prevents this from affecting the weapon's user by causing the plasma stream to reach fusion a few metres from the weapon's muzzle. A fusion gun is, in theory, safe for use by someone not wearing battle dress or other radiation-protective armour. However, the slightest imperfection can cause fusion to start dangerously close to the weapon, drenching the operator in radiation or, in a worst-case scenario, a fusion gun may generate radiation inside the weapon itself.

Standard plasma and fusion weapons are found on page 124–125 of the *Central Supply Catalogue*. They are potent enough that most users consider them to be in the realm of support weapons or specialist anti-armoured infantry systems and do not consider there to be a requirement for anything heavier. However, specialist plasma weapons do exist, primarily for use by or against armoured infantry.

PLASMA GUN, ANTI-ARMOUR

The standard Plasma Gun, Human-Portable (PGHP) fires a single pulse or bolt that is immensely distributive but is very much a generalist weapon. It will penetrate most forms of battle dress on a clean hit but TL13 battle dress will completely resist approximately 35% of hits and not be disabled by a single hit at least 50% of the time. The anti-armour variant increases the chance of a penetrating hit by generating three smaller plasma bolts in rapid succession. Ideally, these strike in a bracket pattern causing overlapping thermal-explosive shocks a few microseconds apart. The net effect is more likely to breach heavy personal armour, although raw damage output is reduced.

The reduced damage is annotated as DD3, meaning D3x10 rather than the usual 1Dx10 for a Destructive weapon.



PLASMA GUN, ANTI-ARMOUR

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
PGAA-13	13	300	DD3	12	Cr85000	—	—	AP 24, Bulky

PLASMA SUPPORT WEAPON, ANTI-BUNKER

A scaled-up version of the PGAA-13, this variant is bigger all round, with twin barrels and firing chambers. It is clumsy even for use in battle dress but provides armoured infantry forces with the capability to crack armoured vehicles and heavily reinforced positions. The bulk of the weapon is such that even with gravitic compensation it suffers DM-2 to attack rolls against any moving target but users can learn to use the ponderous swing of the weapon to 'ambush' a moving target by firing at a fixed point it is to pass through. The PSWAB-13 is more commonly used against static targets such as strongpoints and grounded spacecraft.

The bolts fired by this weapon arrive in pairs, with three such impacts delivering repeated shocks to the target. Resilient materials that might resist a single greater force may be dispersed or shattered by the bracketed plasma explosions or layered armour may be penetrated in a shock-tunnelling action. The results are devastating on a clean hit but this may not occur even against a static target. When the weapon scores a hit, roll 1D. Multiply this by eight to generate the AP trait. Damage is 1DD on a roll of 1–3 pulses and 2DD on 4–6.



PLASMA SUPPORT WEAPON, ANTI-BUNKER

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
PSWAB-13	13	250	Variable	26	Cr225000	—	—	AP Variable, Bulky

Armoured Infantry Platoon (TL13)

Although designated a platoon, this force can field only two sections of actual armoured infantry, with the remainder of the formation made up of supporting troops. The unit's headquarters is officially stated to be 'at the head of the attack' but the unit's commander receives assistance from a headquarters and support contingent. The HQ team rides in an unarmoured air/raft and consists of the unit's coordinating officer – who takes care of logistics and information-transfer – plus a pilot and an electronic warfare/communications technician. This section does not fight, except in self-defence, but acts as a force-multiplier, enabling the commander to lead from the front whilst still having access to detailed information at need. The unit also has a workshop section, who operate out of a pair of beat-up grav trucks when in the field. These personnel are also non-combat, if at all possible, but have small arms for self-defence.

The unit's two combat sections are named 'red' and blue'. Red section contains four 'fighting' troopers, including the unit commander, equipped with battle dress, and four 'supporting' troopers equipped with combat armour. The latter are expected to engage the enemy directly but are each assigned to support one of the battle dress operators. Their role is to protect their assigned suit and provide additional firepower at need.

Blue section has only one battle dress suit and one powered armour suit. Its six combat armoured soldiers operate as the primary striking force of the section, with the two heavier suits providing heavy fire support. The unit as a whole uses a 'Red assaults, Blue secures' tactic most of the time, which is generally effective. Equipped mostly with gauss weapons, these troopers are capable of tearing an enemy installation apart or punching a hole in defences for conventionally equipped forces to exploit.

METEORIC ASSAULT SPECIALISTS

A meteoric assault is a descent from orbit using individual or small-unit entry capsules. Most meteoric assault-capable troops are equipped with battle dress, although this is by no means universal. Personnel must be at least adequately trained to operate their suits and the entry capsules, and will often be equipped for a close assault role. Meteoric assault is normally used to secure an objective such as a spaceport, allowing reinforcements to be brought in or to launch a decapitation strike at enemy command and control facilities. It is always a risky gambit as troops cannot carry a great deal of supplies and ammunition. Even with resupply capsules the force can only hold out so long and must be extracted or reinforced.

Meteoric assault is a useful way of getting into enemy positions but getting out again usually requires pickup using conventional shuttles or grav vehicles. This may be impossible if the enemy's aerospace defences are not silenced, making the assault something of an all-or-nothing prospect. Mercenary meteoric assault formations are particularly careful about the level of support they are to receive – if the client decides to abort the mission after the capsules have begun their drop, or fails to follow up an initial success, the force can be compromised.

In addition to the usual drop onto a key target, there are other options for a force of this nature. Sometimes meteoric drop is the only way to get reinforcements to a threatened point or the force might be dropped ahead of an advancing enemy to slow them down. A drop onto the enemy supply line can be effective and if money is no object it is possible to drop troops onto key infrastructure and destroy it, or launch an ambush of supply convoys, then retrieve the force by shuttle and do it again elsewhere. In this manner a small but expensive force can tie down much larger troop numbers defending possible targets or rushing around trying to respond to the raids. An enemy facing this sort of operation might try to conceal defences and draw the meteoric assault force into a trap, although this rarely succeeds.

Meteoric assault forces sometimes mount 'A to B' operations, where they drop on a target location then maraud around the enemy's rear area for a time, eventually heading to a secondary objective for extraction. Operations of this sort are often accompanied by

Meteoric Assault Specialists

To qualify as a meteoric assault specialist unit, a formation must meet all of the following criteria:

Equipment: The force must be equipped with sufficient means of getting its fighting element on the ground. This means enough assault capsules for each front line soldier and associated maintenance and support equipment. Personnel will usually be equipped with combat armour or battle dress but some variation is possible. It is highly unusual for a meteoric assault to be made in conventional armour, or even shirtsleeves, but there may be occasions where it is necessary.

Skills: Whether they use sealed-suit armour or not, all members of a meteoric assault formation must have at least Vacc Suit 1, representing training in the use of space-based delivery systems and life support equipment in the pod.

aerospace support or orbital fire to eliminate heavy centres of resistance. An 'A to B' might be used as a demonstration of what will happen to a mid-tech opponent if they do not come quickly to the negotiating table and be more about making a statement than achieving military aims. Mercenaries might be called upon to land at important landmarks and historic sites and destroy them, which some find distasteful. This would not be a war crime if there is a clear political objective, however wanton destruction might result in the unit being investigated by the licensing authority.

Making a Meteoric Assault

A meteoric assault can be conducted using a standard re-entry capsule (see *High Guard*, page 46) but this is extremely hazardous as the capsules are intended as escape pods rather than assault units and have no defences. They do not evade on the way down, as they are intended to support a possibly injured occupant. From TL9, dedicated military assault capsules become available.

The standard assault capsule has a basic ECM suite and automated decoy dispenser, and uses a semi-random pattern of deceleration to reduce the chances of a hit by aerospace defences. The normal mode of operation is to drop fast and 'quietly' (in so far as this is possible) until the ECM suite detects a response. At this point, the capsules will begin to evade and scatter decoys. How effective these are depends greatly on the quality of the pod and the level of support available. A standard automated deployment is always an option but a unit commander can choose whether to try for greater concentration in landing or a more defensive drop, which makes best use of evasion and countermeasures.

In the latter case, the unit commander may choose a DM from -1 to -4 to be applied to enemy attempts to shoot down assault or supply capsules. This DM is applied whatever the result of the scatter calculation. The more effective the DM, the more unpleasant the entry is for the troops – but most will accept that arriving alive and shaken up is better than arriving in fragments.

If there is significant resistance, the force will almost inevitably take losses on the way in. A meteoric assault is resolved as a round of combat between the attacking force and the aerospace defences they face. The attacker must use the Vertical Envelopment tactic and any level of aggression that seems appropriate, although generally an aggressive approach is chosen. The assaulting force does not do any damage to the defenders in this phase, although its supports might using a bombardment tactic, which is resolved separately. The DM-1 to -4 chosen by representing the assault commander is applied to the enemy's ECEI check to resolve the action. No matter what

the result, the assault force will end up on the ground; this phase is all about determining how many casualties they take before they get into action. Once the force is on the ground, its degree of scatter is determined and the mission proceeds as normal thereafter.

Degree of Scatter

To determine the degree of scatter experienced by the force, roll 2D with the following modifiers and consult the Scatter table.

DM chosen for evasion: DM+0 to DM-4

Turbulent conditions (strong winds, bad visibility): DM-2

Difficult terrain with few good landing points (urban area, steep hills or marsh): DM-2

Very difficult terrain (mountains, forest, 'toughened' urban area): DM-4

Unit has Meteoric Assault trait: DM+2

Unit's average Vacc Suit skill: DM+ skill level

Urban areas can be 'toughened' against meteoric assault by the creation of 'vertical barricades' to deny an enemy easy landing points or by constructing buildings with steeply sloping rooves and dangerous projections.



Scatter

2D+ Modifiers	Degree of Scatter	Effects
0 or less	Extreme, heavy casualties	Unit suffers 2Dx5% additional casualties before even reaching the ground. Forces are scattered over a wide area, imposing DM-4 on all combat resolution checks.
1-2	Extreme, casualties	Unit suffers 2Dx3% additional casualties before even reaching the ground. Forces are scattered over a wide area, imposing DM-4 on all combat resolution checks.
3-4	Severe, Casualties	Unit suffers 2D% additional casualties before even reaching the ground. Forces are unevenly scattered in small clumps, imposing DM-3 on all combat resolution checks.
5-6	Serious	The force is scattered in small clumps, imposing DM-2 on all combat resolution checks.
7-8	Dispersed	The force is scattered in clumps, with most small units more or less intact but separated. Dispersal imposes DM-1 on all combat resolution checks.
9-10	Organised	The force arrives in an organised manner, with most personnel in their sub-units and on their designated landing points.
11-12	Concentrated	The force arrives precisely on target, at the right time and ready to fight. DM+1 applies to ECEI checks in the first 1D phases of the operation.
13-14	Highly Concentrated	The force arrives in near-perfect order, with troops dropping right into enemy positions or bypassing obstacles in a manner that compromises the enemy's defence plan. DM+2 applies in the first 1D phases of the operation.
15 or more	Perfect	The force makes a spectacularly effective drop, gaining DM+4 in the first 1D phases of the operation.

Gathering and Regrouping

A scattered or dispersed force can try to progress with its mission using whoever is at hand or attempt to regroup. Regrouping requires a successful Average (8+) Tactics (military) check and is effectively a phase of the operation during which the force might be bombarded or attacked. Regrouping in contact with the enemy is subject to DM-4; doing so under bombardment but not in close contact is subject to DM-2. A successful check improves the degree of scatter by its Effect, to a maximum level of Organised. An unsuccessful attempt has no adverse consequences unless the Effect is -6, in which case scatter becomes one category worse.

For example, a meteoric assault into mountains, in a high wind, imposes DM-6 on the Scatter table and the unit's commander uses a pretty vigorous evasion pattern imposing an additional DM-3. The unit gains DM+2 for its average Vacc Suit skill but with a net DM-7 this is a very risky drop. Rolling 9 on 2D, the commander determines the unit has suffered extreme dispersion and 2Dx3% casualties. No less than 27% of the unit become casualties during the landing phase – although many of these are slight or represent personnel who are lost rather than hurt. If the mission is successful most of these troopers will be available for duty in the next day or so. They are not available for the assault, however.

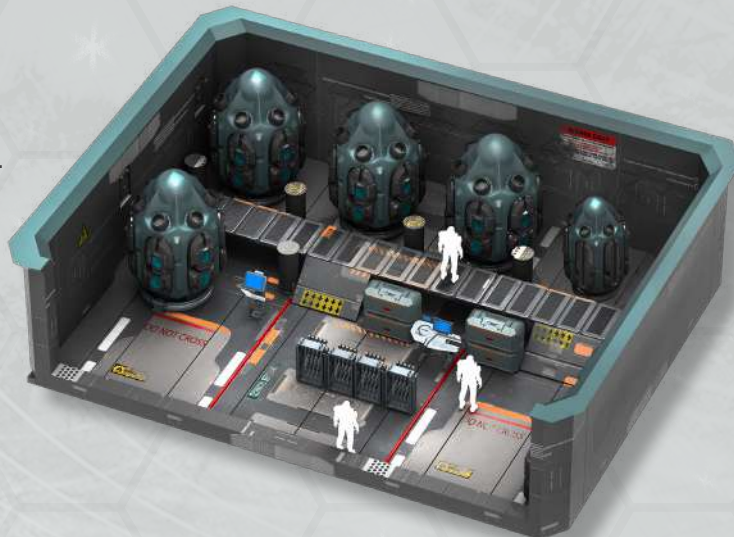
Those that have made a landing are scattered over a wide area, with members of different sub-units mixed up wherever their capsule could find somewhere flat enough to land. If the force tries to go into action immediately, it will suffer DM-4 to resolve combat. The unit's commander decides to regroup. There are no hostiles in contact but the enemy has begun lobbing artillery shells into the general area and an air strike will be made against whatever part of the assault force is detected. Regrouping under bombardment is subject to DM-2 but the commander still succeeds with Effect 2.

At the end of this phase of the operation scatter has improved from Extreme to Serious, which is still sub-optimal. However, with an enemy ground force entering the area the commander decides to head for the objective rather than trying to regroup under fire. The troops who have become casualties are unavailable, no matter how carefully the unit regroups, although casualty evacuation would be easier if the force is fully grouped. However, if the objective can be attained the force can be gathered up afterwards, so the commander presses on with the troops available.

METEORIC ASSAULT SYSTEM

The re-entry capsules and pods described on page 46 of *High Guard* can be used for a small-scale assault or emergency deployment but units specialising in meteoric assault require a specialised facility. A meteoric assault system deploys four capsules simultaneously, along with a fifth, smaller, unit containing decoys and disposable electronic warfare equipment. Depending on settings, the fifth capsule may remain close to its designated squad or deviate well away in the hope of attracting enemy fire. If multiple systems are making a coordinated drop, the protective capsules will be directed to assist one another using a combination of distraction, confusion and seduction to weaken the enemy's anti-aerospace response.

A meteoric assault system consists of a small ready chamber and launch tubes penetrating the hull. The personnel capsules impose DM-2 on attempts to detect or target them using electronic sensors and provide Protection +24 to the occupant. Their manoeuvring systems allow a commander to decide how violently the force's capsules will evade, imposing DM-1 to -4 on enemy attempts to target them at the cost of risking a widely scattered force. Replacement capsules cost Cr25000, although used capsules can be recovered and refurbished for about half that cost.



Item	TL	Tons	Cost
Meteoric Assault System	12	4	MCr0.5

METEORIC SUPPORT SYSTEM

A meteoric support system is used to deliver heavy equipment and vehicles from orbit. Cargoes are dropped in a single capsule but break-apart versions are available, which can deliver to multiple points or scatter munitions and supplies over a target area to ensure at least some land near the intended recipients. The capacity of the unit is based on the number of payload tons it can deliver. Vehicles and equipment require 25% more capacity than their shipping requirement, and vehicles can be delivered with crew inside. Thus an APC rated at 10 tons for shipping requires 12.5 tons of support system capacity but could carry its own crew and cargo inside.

Personnel capsules can be delivered at a rate of two per ton of capacity but this is a dense drop intended mainly for reinforcement of an established landing zone. The capsules cannot use a selected evasion DM and even after breaking away from the central drop unit will be sufficiently concentrated that an enemy gains DM+2 to detect and target them. DM+4 applies on the Scatter table, however, as the force will be close together until final approach. It is common to drop artillery and aerospace defence weapons in this manner, along with their crew.

The support system consumes four tons plus two tons for every ton of payload capacity and includes a delivery capsule. Single capsules cost Cr50000 and provide Protection +18 to the occupants, whereas break-apart capsules provide no significant armour protection and cost Cr30000.



Item	TL	Tons	Cost
Meteoric Support System	12	Variable	—

Orbital Spearhead Platoon (TL12)

This combined arms force uses grav vehicles and combat armour to assault directly onto enemy positions and has virtually no 'tail'. A liaison and coordination officer, accompanied by a couple of bodyguard/technicians, is detached when the unit signs up with a client and does not take part in combat drops. All other personnel are part of the unit's 'teeth' formations. The command section has two vehicles; a light grav tank that serves as the command vehicle and a ground-attack gunship for direct fire support. The other three sections consist of grav APCs equipped with rapid-fire anti-personnel weapons, each carrying a six-soldier ground assault team.

Standard tactics are to drop all five vehicles from orbit in their protective capsules, transiting atmosphere at speeds that would damage a grav vehicle operating under its own power. At the point of final approach the capsules are explosively jettisoned and vehicles conduct final braking and descent. Troops will generally debus directly into enemy positions, conducting a rapid close assault supported by their vehicles' weapons whilst strongpoints are eliminated by the command section. Although risky, this strategy can be stunningly effective against unprepared enemies. If necessary the unit can retire in its own vehicles or switch to a conventional lift infantry mode of operations as reinforcements arrive.

VACC TROOPERS

Units specialising in combat in conditions requiring protective equipment are colloquially known as 'vacc troopers', although they are equally capable of operating in a toxic or unbreathable atmosphere. Some vacc trooper units are also armoured infantry but many use vacc suits, boarding suits or reconfigured rescue suits. Any infantry force could be issued this equipment and given cursory training but this is not sufficient to qualify a unit as vacc troopers. For that, a high level of capability in low-gravity or vacuum operations is required.

Many vacc trooper units favour energy weapons as their lack of recoil can be a huge advantage. Snub and accelerator weapons are also popular, although snub weapons are sometimes seen as the preserve of security rather than combat forces. One of the biggest challenges facing a vacc trooper unit is the problem of penetration or lack of it. It is generally undesirable to punch holes in a spacecraft or installation but at the same time it may be necessary to penetrate heavy armour. Indiscriminate weapons such as plasma guns are generally not favoured by units expecting to fight inside structures and ships but are considered valuable by many units trained for 'outdoor' combat.

Vacc Trooper Specialists

To qualify as a specialist vacc trooper unit, a formation must meet the following criteria:

Equipment: All of the unit's combat personnel must be equipped with vacc suits or similar environmental protection.

Skills: Personnel must possess an above-average level of training in vacuum and protected-forces operations. All combat personnel must have Vacc Suit 1 or better and at least 25% of combat personnel must possess either or both Gun Combat 2+ or Vacc Suit 2+.



Fighting in a Vacc Suit

Vacc suits, like all personal protection, can be bulky and clumsy. One of the main problems encountered by Travellers trying to fight in a suit is handling weapons whilst wearing gloves. Some weapons are designed in such a way as to make this less of an issue, such as firearms with enlarged trigger guards, selectors and the like. Gloves will not affect a shot or a swing with a hand weapon all that much but when trying to do something that requires fine control such as reloading or plugging in a laser's powerpack, a weapon not designed for vacc suit use imposes DM-2 on any checks that would normally have to be made. An action that would not normally require a check – like reloading – requires a Routine (6+) check without this DM. Essentially, operating under stress in a suit makes normally effortless tasks require a check and tasks that normally require a check become harder. This does not apply to attacks or actions that require only gross motor control.

Standard vacc suits are designed primarily for environmental protection rather than for use as personal armour. They are tough and can be used as armour but do have weak points. Faceplates, joints and seams are all more susceptible to attack than the main components of the suit, so it is possible to rip one either accidentally or with a weapon. All but the most basic suits are designed to seal around a small breach, making it possible to fight on with a leaking suit until the problem absolutely must receive attention.

Connections are designed to be secure but also easy to operate. For example, a hose carrying air absolutely must not come loose if knocked but at the same time it may be necessary to change in a hurry. A Traveller who has suffered damage to their life support equipment might be saved if their air hose can be quickly unsnapped and a feed applied from a buddy hose or emergency life support unit. For this reason it is relatively easy to undo important parts of a suit deliberately and virtually impossible for it to happen accidentally. Combat vacc suits and most forms of sealed-suit armour have the option to lock all connections in place, either physically or using an electronic system, which interrogates the friend-or-foe transponder of nearby suits and locks connections down if the nearest suit is not friendly.

It is possible to target these weak spots in close combat or even with a ranged weapon if the target is not moving much. A Traveller who makes a successful grapple attack may try to pull out hoses or disconnect other pieces of equipment. If successful, this will breach the victim's suit unless they have a locked-down military version. A breach is not necessarily fatal and will normally cause a small leak that will take 1D rounds to have any significant effect after which

the suit's occupant takes 1D damage per round from depressurisation. A catastrophic suit failure can be caused if the attack has Effect 6+, such as smashing a faceplate or disconnecting a major supply conduit.

Trying to shoot out a faceplate or cause a similar failure is virtually impossible if the target is moving around a lot. However, since most movements in microgravity tend to be slow and careful, the opportunity may arise. Trying to hit something as small as a faceplate imposes DM-6 on the attack roll. If struck, a faceplate or other critical component may resist the attack. Treat the component as having half the suit's Protection and a number of hits equal to its Protection. If this is defeated, whether in a single or multiple attacks, the component will fail. In the case of a shattered faceplate this is likely to be almost instantaneously fatal.

The same mechanics are used when attacking combat armour or even battle dress but components are almost certain to be locked in place. Faceplates are smaller, imposing DM-12 on any attempt to target them. A TL13 battle dress faceplate would be treated as having Protection +11 and 22 hits, making it virtually impossible to break with most weapons.

Operating in Microgravity

Microgravity, sometimes referred to as zero-G or weightlessness, poses real problems for combatants. Anyone firing a weapon or trying to swing a weapon risks spinning out of control. In particular it is difficult to generate sufficient force to harm someone by the impact of a weapon. Sharp blades can still slash, and pointed objects can impale, but any hand weapon relying primarily upon impact reduces each dice of damage to D3 unless the user is firmly anchored by some means.

Any weapon with recoil, and all hand weapons except small stabbing implements, may set the user spinning if they are free to move and can disorient even an anchored Traveller. An Athletics (dexterity) check is required to avoid this unless the weapon has the Zero-G trait or obviously would not cause this effect. A Traveller who is gripping a handhold or is similarly anchored – for example with a leg hooked around the supports of a table that is bolted to the floor – gains DM+2 on this check. An opponent may be struck to disorient them or this can happen when a projectile or hand weapon impacts someone. Lasers and most other energy weapons will not send a target spinning but most other weapons can.

Microgravity presents a range of new tactical options for combatants, allowing them to outflank enemies in three dimensions. However, once a jump is made the Traveller will coast until they hit something. Firing a

Microgravity Mishaps

2D+ DMs	Result
0 or less	The Traveller loses their anchor point and begins to spin violently. An Average (8+) END or Vacc Suit check is required each round to be able to act at all and DM-6 applies on all tasks including attempts to reorient.
1-2	The Traveller loses their anchor point and begins to drift, spinning quickly on three axes. DM-4 applies to all actions until the Traveller reorients, including attempts to reorient.
3-5	The Traveller loses their anchor point and begins to drift, spinning slowly. DM-2 applies to all actions until the Traveller reorients, including attempts to reorient.
6-8	The Traveller is badly misaligned or loses their anchor point and starts drifting. No negative DM applies to actions but the Traveller needs to reorient and get back into contact with an anchor point.
9-11	The Traveller is misaligned. Suffer DM-2 on all actions next round, after which the Traveller automatically reorients themselves.
12 or more	No disorientation.

weapon will push them off course and perhaps induce a spin. Once they reach the target point the Traveller must grab hold of something or they will bounce off and float until they strike something else. Grabbing a projection normally requires an Routine (6+) Athletics (dexterity) check. Smoother surfaces will make this check more difficult, whilst having plenty to get hold of might make it easier but increase the chances of being injured if the Traveller fails.

Anyone who risks disorientation must roll 2D on the Microgravity Mishaps table, with a positive DM equal to their Vacc Suit skills. Negative DMs also apply.

Traveller struck by a weapon: DM-1 for every 5 full points of damage taken.
Traveller was deliberately pushed in such a way as to make them start spinning: DM- the attacker's STR DM.
Traveller was disorientated by their own weapon: DM-1 for every 1D of damage the weapon delivers.

Travellers who lose contact with their anchor point, and particularly those who are spinning, must reorient and get back into contact with something they can use as an anchor. This may require twisting around to grab something, pulling on a safety cord or rather desperate measures like firing a weapon in the hope of counteracting spin or being pushed in the right direction. A Traveller who cannot interact with something and who possesses no means of generating thrust is in real trouble and will spin until they collide with something. Those with the means to counteract a spin can do so by making an Average (8+) Vacc Suit check.

Fighting on a Low-Gravity Surface

Low-gravity surfaces such as large asteroids or very small planets create a unique combat environment, which can confuse those lacking the right training and can even be lethal. Moving too quickly can result in

a Traveller losing contact with the ground for a period of several seconds or more, possibly floating up above intervening cover to become a sitting target for enemies. Movement must be slow and careful, which is at odds with the usual advice to move in short rushes between positions of cover. Indeed, low-gravity surface combat is often considered more dangerous than microgravity due to the instinct to dive into cover or try to run.

Something as minor as recoil from a weapon can cause the shooter to lose contact. In extreme cases it is possible to bound off the surface of an asteroid, and simply float away into space, or be propelled off the surface by weapon or debris impact. Some vacc trooper units routinely deploy anchoring tethers when operating in such environments, although this limits tactical mobility. Experienced vacc troopers learn to anchor or brace themselves, using adapted firing stances that counteract the tendency to spin or be pushed off the surface.

Dust can be a major problem on low-gravity surfaces. It is easily disturbed by personnel moving through it or incoming fire and will float above the surface for an extended period. This can obscure line-of-sight and interfere with laser weapons, a fact well known and often exploited by those who fight in this environment.

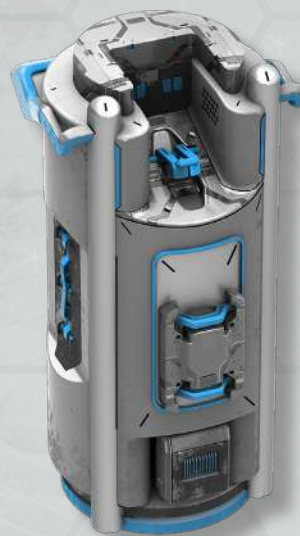
Troops used to fighting in a normal-gravity environment will instinctively aim high when shooting at distances of more than a few metres, as they are expecting the projectile to drop under the influence of gravity. This does not apply to those whose customary weapons are lasers or extremely high-velocity projectile weapons, such as gauss rifles, but a force used to conventional weapons in a more normal environment will suffer DM-1 on all attacks beyond 50 metres until they adapt.

DRIVE INHIBITOR

Preventing a grounded starship from simply taking off and flying away can be a problem for vacc trooper units. Those that can afford it make use of a gravitational hysteresis device, more commonly known as a drive inhibitor. This bulky, 20 kilograms cylinder contains components similar to those used in a spacecraft's lift-and-drive system, but are configured rather differently. When exposed to a rapidly changing gravitational field such as that generated by a starship preparing for take-off, a hysteresis cycle is induced within the inhibition device, essentially bleeding off energy from the ship's drive system. This will not be effective indefinitely but will inhibit the development of the drive's gravitational field for 2D rounds per device placed within 10 metres of the ship and 1D rounds for each inhibitor placed within 50 metres.

An inhibitor is unlikely to cause a crash but it will make a landing tricky by weakening the drive as the ship makes its final descent onto the landing pad. The interaction between drive field and inhibitor will actually slow the ship's descent despite the pilot's instruments correctly indicating an energy loss. As a result, DM-2 applies to landings made within range of an active inhibitor but the effect will be a weird bobbing-about and relatively soft but poorly controlled landing with considerable lateral movement of the ship. Some groundside installations have inhibitors under the landing pad as a safety device – a ship that loses control can be given an undignified but fairly safe landing by

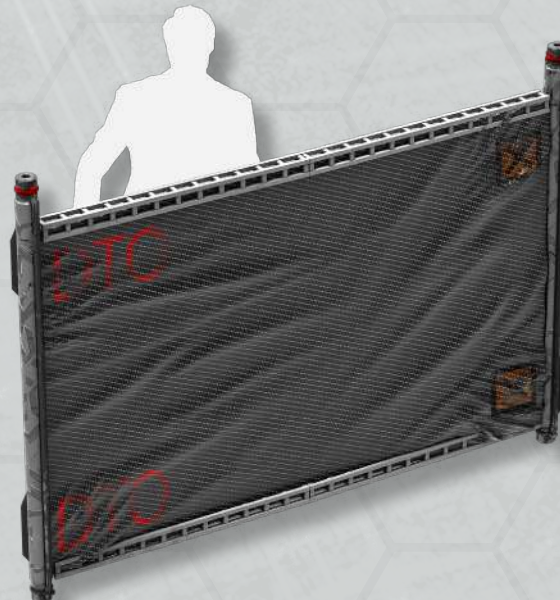
their quick activation. Of course, the same devices can be used to delay take-off of a suspect vessel. The inhibitors can be deactivated by misaligning their internal components, which is usually done by motors controlled from a remote station. Once out of their correct alignment the components have no discernible effect on starships nearby.



Item	TL	Kg	Cost
Drive Inhibitor	10	20	Cr350000

DEPLOYABLE TACTICAL OBSTRUCTION

Deployable Tactical Obstructions, or DTOs, typically consist of a pair of metal posts about 1.5 metres in length, with a flexible curtain of robust material between them. The pair can be rolled together and carried under the arm of an advancing vacc trooper, then deployed by ramming the base down hard to trigger its explosively driven bolts into any hard surface such as bedrock or a landing pad. Stretching the curtain between the two creates a two metre long barrier that provides Protection +12 to anyone behind it. The base can be detached, allowing the obstruction to be picked up and a replacement base plate snaps into position. Deploying the obstruction takes two rounds. Pulling one up takes only one round but D3 rounds are required to fit new base plates. A skilled unit can leapfrog forward using positions of cover it creates, although commonly some personnel will also be equipped with hand-held shields to protect their comrades as they work.



Item	TL	Kg	Cost
Deployable Tactical Obstruction	8	3	Cr6000

REXWELL MILITARY VACC SUIT

One of the more common pieces of equipment used by vacc trooper units, the 'Rexwell Suit' is a militarised vacc suit with a number of features not normally required by civilian users. The suit is optimised for rapid movement rather than heavy protection but has a reinforced torso protector and enhanced head protection. A self-sealing layer between the inner and outer skins of the suit is designed to limit the effects of a penetrating injury and radiation protection is a little better than standard. All connectors are keyed to an automated identification friend-or-foe system, which also projects the location and status of nearby unit members onto the user's faceplate upon demand.

The Rexwell suit has magazine/grenade pouches and holders for standard military equipment, including three safety tethers, which can be instantly fixed to almost any solid surface using molecular glue. Although frequently used with snub or accelerator weapons the suit has two standard options, both of which are based around laser weapons. The standard combat package uses a laser carbine of unusual design; the fore end of the weapon is conventional, with a vertical foregrip for two-handed firing. However, the rear of the weapon is designed to be braced against the user's forearm, terminating in an elbow hook rather than the more normal full or folding stock. The carbine is balanced for one-handed shooting – using either hand – leaving the other free to brace or manipulate controls. The suit's chest protector is grooved to seat the projections of the elbow hook if the weapon is to be shouldered for aimed fire, although this is not a comfortable position due to the shortness of the stock. Power for the carbine is provided by a standard power pack that attaches to the rear of the chest protector.

The second option is intended for close assault work. A lightweight shield can be fitted to the forearm – usually but not always the weak hand – and provides an additional Protection +6 against attacks from this direction. The shield is designed for quick detachment in an emergency but is otherwise very firmly attached. The user can pair the shield with any one-handed firearm, including the Rexwell laser carbine, but is often used with a dedicated hand weapon. This is a twin-pronged stabbing implement, with spikes protruding 25 centimetres ahead of the user's fist. 10 centimetres from the tip are a set of downward hooking secondary blades, which are sharp on the reverse face. These can be used to hook onto any nearby object for assistance in movement or to rip flesh or suits with a grab-and-pull action. Like the shield, the hand weapon is firmly attached but easy to jettison, allowing the user to switch to a sidearm or other weapon.



CONTINUED

REXWELL MILITARY VACC SUIT

Armour Type	Protection	TL	Rad	Kg	Cost	Required Skill
Rexwell Military Vacc Suit	+9	10	75	12	Cr25000	Vacc Suit 1

Weapon	TL	Range	Damage	Tons	Cost	Magazine	Magazine Cost	Traits
Combat Shield	10	Melee	1D	1.5	Cr500	—	—	—
Rexwell Laser Carbine	10	200m	4D+1	2.5	Cr5000	50	Cr3000	Zero-G
Combat Spike	10	Melee	2D+2	1	Cr250	—	—	—

SALVATION KIT

Officially deployed under all manner of designations, 'salvation kits', as they are known in spacer parlance, are used by rescue crews and vacc trooper medics. In addition to an array of large and small suit seals and patches the kit contains some equipment not found in the standard self-rescue packs carried by almost all suits. A set of torso wraps as well as limb and head coverings with extremely fast-acting bonding agents can be dispensed, allowing a body part to be protected for an indefinite period, even if the vacc suit on that area has been shredded. The coverings balloon up when sealed to an intact part of a suit and are too clumsy to use for work but will save lives. The transparent head cover seals to the torso and shoulders of a suit and can be used as an emergency helmet, if necessary. It is unlikely that someone whose faceplate has been shattered could be saved in this manner but the cover will work over a serious hole that would otherwise prove fatal. These coverings are useful in situations where a suit has been holed and has jagged debris preventing a conventional patch.

The kit also contains a set of emergency air bottles, short-term power units that can keep a disabled suit running for a couple of hours, and an aid tent that can be inflated on a surface or in free space. Attempting emergency surgery inside a transparent balloon tethered to a nearby piece of debris is an extreme case of the 'foxhole miracle' asked of medics in countless wars, however the kit at least creates a fighting chance to stabilise a casualty and wrap them up for transportation to a proper medical facility. The tent has an airlock compartment and could in theory be used as a shelter whilst undertaking an extended vacc-suited operation.



Item	TL	Kg	Cost
Salvation Kit	10	8	Cr15000

THRUST FRAME

A thrust frame is a skeletonised torso cover, mounting small thrust jets at the shoulders and hips. It is designed to fit over a standard vacc suit, providing an additional manoeuvring capability using compressed gas stored in the hollow frame. A frame can provide station-keeping thrust, essentially pushing the user against a surface so they can walk more or less normally, or be used for free-space mobility. The primary advantage of the unit is the ability to manoeuvre without requiring a hand-held thrust device. The frame's automated systems will correct a spin or drift upon command, without requiring action from the user.

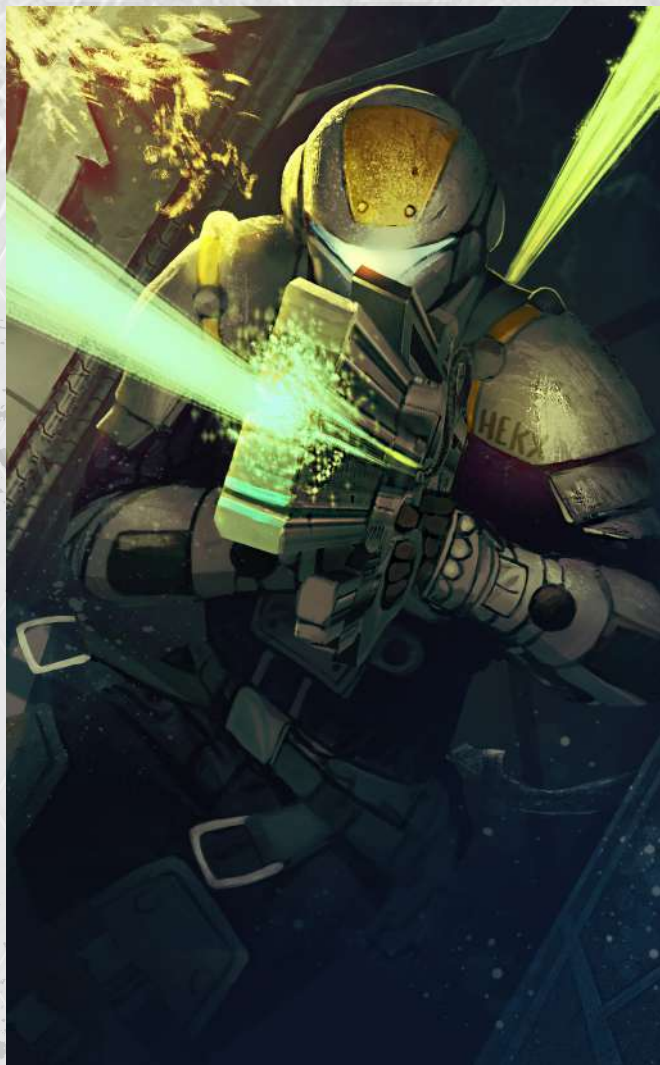
Item	TL	Kg	Cost
Thrust Frame	10	4	Cr7500



VACC TROOPER SURFACE ACTION UNIT (TL10)

Trained primarily for 'outdoor' combat on a planetary surface with no atmosphere, this 50-strong unit uses a non-standard organisation based around ad-hoc teams of 4–12 personnel. Favoured personal weapons are laser carbines, with support gunners using low-velocity guided grenade launchers for indirect fire where there is low or minimal surface gravity. Most personnel are equipped with vacc suits, with a few boarding suits used by the close-quarters specialists.

The majority of situations faced by a unit of this sort involve crossing an area of open surface with minimal cover in order to enter an installation or grounded starship. Hand-held shields and portable obstacles are highly useful in such situations, although properly anchoring an obstacle in low gravity can be a challenge for untrained personnel. The ability to move efficiently – not necessarily quickly – over uneven footing in minimal gravity is necessary to avoiding casualties. In any team, at least one member is trained in starship-entry techniques using explosive cutters to breach weak points such as maintenance hatches as well as the more usual airlock-forcing techniques.



NON-COMBAT SPECIALISTS

The idea of non-combatant mercenaries seems strange to some observers but there are several areas where experts can improve a client's military capabilities without firing a shot. Most mercenaries working in these fields will have military experience but it is possible to encounter former civilian defence analysts and even accountants, administrators and lawyers who have never been in uniform.

It has been wisely said that some great battles were won in a procurement meeting 15 years previously, or on the training grounds of a force that got its preparations just right. A handful of quite expensive consultants who are able to share their experience now may save vast sums of money and countless lives in the future. Conversely, some non-combatant specialists do act directly against the enemy – such as cyberwarfare experts – or to support and protect friendly forces.

ADVISORS

The term 'advisors' covers a range of related activities of mercenaries. In some cases it is a euphemism, creating the polite fiction that the 'advisors' are only there to teach and demonstrate when in fact they are carrying out combat operations on behalf of the client. If the mercenaries are operating on their own then they are not really advisors. If the legality of the operation is questioned the mercenaries and their client may be investigated. In many cases there will be no reason why the operation would be declared illegal or illegitimate but the presence of mercenaries might be embarrassing for the client – especially one that has denounced their use by others. In other cases advisors are allowed but they are supposed to be non-combatant except in self-defence, which makes offensive operations a violation of regulations and creates the possibility of legal issues.

The majority of advisors are legal or at least plausibly non-illegal. Advisors embedded in a local force to assist with training and the gaining of practical experience might fight alongside the unit they are



assisting without violating their advisory status, providing they are a minority acting as a cadre and not the primary fighting force. Other advisors are purely that, providing expert assistance to the client on specific issues or working to improve the efficiency of armed forces. Many specialists working in a range of fields are generically referred to as advisors, especially if the client wishes to conceal what they are actually doing.

As a rule, mercenaries on an advisory contract will not see much direct action against the enemy. Their influence on the client's military campaigns will be indirect but may still be extremely important and their adventures will be more along the lines of conventional *Traveller* scenarios, leaning into intrigue and political arenas. A campaign centred around a group of advisors is likely to be varied and could be the basis for something bigger in scope. For example, if the Travellers have an agenda, such as realigning the political allegiances of the region or preventing the growth of a nasty dictatorship they might hire out as advisors to the 'right' clients and help them, and might even take contracts with the 'wrong' ones in the hope of undermining them. This would be a risky business for a pure mercenary group as it may mean deliberately being unsuccessful, but if mercenary status is merely a means to an end it is a viable strategy.

Advisors

The range of situations in which advisors may be hired is very wide, so it is not possible to determine specific criteria. As a rule, personnel hired as advisors must meet one of the following criteria:

Skills: All personnel hired as advisors must possess relevant skills. For experts, skill level 3+ is expected, with supporting staff having skill level 2+ in a relevant field.

Experience: All personnel must be familiar with the political and military ramifications of their contract. Military experience is preferred but some form of provable experience in a relevant field will suffice. For example, a legal expert might not have military experience but would have to prove they worked in a relevant environment such as a corporate body or government.

Cadre and Leadership

The simplest form of 'advisor' campaign has the Travellers acting as trainers and leaders for local forces. The Travellers might participate in operations alongside their trainees or try to get them out of trouble when things go wrong. Most adventures and missions will be along conventional mercenary lines, with the occasional foray into local politics. This is a good campaign style for Travellers with military experience who do not want to get involved in running a full-sized mercenary unit and think they may want to switch back to conventional adventuring at some point.

When acting as a cadre the Travellers will be engaged in training their client's personnel. This can be abstracted using the rules in *Running a Mercenary Force*, feeding into missions and adventures when something unusual arises. If a more detailed training programme is required, one can be created using the guidelines here.

Training Programmes

Training programmes fall into three categories: Basic, Advanced and Specialist. Each trainer can effectively teach one student per point of INT and EDU but Basic and Advanced training programmes can be split among multiple personnel, not all of whom need possess all relevant skills. The amount of INT and EDU points required is increased by 25% for each additional skill being taught. It is only possible to train personnel to one skill level below that of the trainer.

Basic Training Programmes can only instil one skill to level 1 and others to level 0. Nominal training time is four weeks plus two weeks per level 0 skill being taught. For example, a basic infantry training regime might be set up to teach Gun Combat 1, Athletics (endurance) 0, Heavy Weapons 0 and Recon 0. This would take 10 weeks and require 1.75 points of INT and EDU among the trainers per trainee. The trainers must have someone among them with Gun Combat 2+ and the other skills must be present at level 1+ among at least some of the trainers.

Advanced Training Programmes can instil one new skill to level 1 whether or not the candidate has previously gained the skill at level 0. Alternatively, the course can raise an existing skill to level 2. In addition the course can instil relevant and related skills at level 0. Nominal training time is 10 weeks to increase a skill to level 2 or six weeks to gain a skill at level 1, plus three weeks per skill gained to level 0. It is possible for candidates to be divided, with some being taught one skill and some another if trainer expertise is available. For example, after completing a basic infantry training course candidates might be moved on to an advanced infantry course increasing their Gun Combat skill to level

2 whilst others are trained in heavy weapons operations or scouting techniques. Sufficient expertise must exist among the trainers to cover all requirements. Thus if 20 candidates are to be taught Gun Combat 2, there must be 20 points of INT and EDU among trainers who possess Gun Combat 3 or better.

Specialist Training Programmes can instil a new skill at level 1 or increase the level of a known skill by one, to a maximum of one level lower than that of the trainers. This process takes a variable amount of time depending on the level of skill being taught, plus three weeks for each additional skill trained at level 0, if any. Additional skills must be relevant and related to the course. For example, a ProtFors programme might teach Vacc Suit 1 and Gun Combat 0 but would be unlikely to cover wilderness survival or technical skills unrelated to vacc suit operations.

National military training programmes usually have a basic and advanced component, in which everyone learns how to be a soldier in basic then is trained in a specialism such as infantry, transport crew, artillery or aerospace defence. A typical programme produces graduates with Gun Combat 1 and level 1 in some other area of expertise, or Gun Combat 2, plus around five to seven military related skills at level 0. This will take around 30–36 weeks. After this, candidates may continue to a specialist school, such as officer training or advanced artillery operations, but many or even most will join a unit to begin their first term of service.

Time Requirements and Completing a Course

There is no guarantee that any given candidate will learn the requisite skills. At the end of the course each student may make an Easy (4+) INT check with a negative DM equal to twice the skill level being learned. Thus a roll to learn a skill at level 0 is made without penalty; at level 2 the penalty is DM-4 and so forth. If the roll is successful, the trainee gains the skill at the trained level. If the check is failed for a level 0 skill the usual process is to repeat part of the course, taking two weeks for each level 0 skill and to try again. Failed candidates may be washed out or sent to a unit with skills lacking in some cases. In the latter case they may pick up the missed skill during their early service or might be one of those 'poor soldiers' who stand out as incompetent and drag the overall capabilities of their force down.

For situations where the Travellers are delivering basic training to large numbers of recruits it is not necessary to check to see if everyone picked up all the skills. The Travellers should not be bogged down in the minutiae of exactly who needs a refresher or a repeat. It is reasonable to assume that the majority of trainees were successful after 20% extra duration, representing time spent repeating the course.

Skill Time Requirements

Skill Level	Time To Learn	INT DM
0	3 weeks	+0
1	6 weeks	-2
2	10 weeks	-4
3	15 weeks	-6
4	21 weeks	-8

CONSULTANTS

The term 'advisor' is used quite loosely – and sometimes deceptively – for anyone providing assistance to local forces. Consultants, on the other hand, are more likely to be involved with high command and political leaders than combat personnel. A consultant group will rarely be larger than a handful of personnel but commands a fee depending on the level at which the force is advising. This does not apply to cadre assignments where the mercenaries are leading and training personnel in the field – that pays at the normal rate. However, when a group of mercenaries is brought in as troubleshooters by a government or to advise on something that will affect the performance of their whole military, government-consultant rates are payable. Such jobs are extremely difficult to get without prior service in politics, warfare or military procurement.

Consultants might be offered a fee for an entire assignment or a salary. Their jobs are well paid but very hard to get and differ considerably from the typical soldier-for-hire mercenary campaign. The monthly salaries on the Consultancy Fees table are a guideline only; a client's offer will be based on the benefit they think they will derive from the consultants' services and the level the consultant is operating at. Troubleshooting the training regime of an entire nation pays more than helping set up a contract to buy a handful of specialist weapons.

Fees are for a suitable consultant group, which will usually mean a top-end expert and a small staff. A client is unlikely to be willing to pay for services they do not need, so the capabilities of a procurement expert will be of no interest to a client wanting someone to prepare aerospace defence plans for the capital unless obtaining the right equipment is part of the requirement. Multi-expert projects typically command the basic fee plus 25–50% more for each additional expert. Fees assume a one-month consultancy period. A client with a longer project in mind will typically offer an enhanced initial fee and a lower monthly payment.

Consultancy Fees

Type	Example	Monthly Fee
Battalion Level	Restructure the battalion's sub-units and equipment to improve efficiency.	Cr25000
Brigade Level	Assist with the formation of a new multi-battalion force and procurement of suitable equipment.	Cr75000
Division Level	Assist in the production of defence plans for a major installation or city, advising on necessary equipment and training as well as organisational and doctrinal matters.	Cr150000
Corps Level	Assist in the creation of complete training programmes for all personnel or a major combat arm such as aerospace defence or armoured troops.	Cr500000
Army Level	Develop a planetary defence doctrine or plans to invade another major nation.	MCr1

High-Level Consultancy Campaigns

A high-level consultancy campaign will tend to create missions and adventures involving subterfuge and politics. The Travellers might find themselves having to deal with the machinations of a local general who does not want them interfering, or who fears exposure as a traitor or embezzler. This kind of campaign has room for Travellers with no military experience at all. Administrators, brokers and scientists all have a potential use to a client that wants to increase their capabilities. A Traveller with university lecturing experience might find this useful when trying to explain to a TL6 government why they cannot simply buy a shipment of meson guns and become invincible. High-level advisors may end up involved in grav car chases, backstreet arms deals and all manner of other adventures, giving this kind of campaign a feeling more akin to a conventional *Traveller* game. The Travellers will also interact with powerful people in local and perhaps interstellar governments, creating opportunities for further adventures.

Troubleshooter Campaigns

A variant on the advisory campaign has the Travellers acting as troubleshooters for a corporation or government. Their brief may or may not include permission to conduct 'black operations' and not tell anyone how the problem was dealt with. Troubleshooters could be essentially commandos, used as a blunt instrument, but might be a subtle team of infiltrators capable of altering the situation without anyone realising something has happened. A troubleshooter team offers the possibility of a typical band of Travellers taking mercenary tickets without the need for a full mercenary campaign.

ELECTRONIC AND CYBER WARFARE

The electromagnetic spectrum is an entire 'dimension' of the complex battlespace in which mercenary units operate and information systems can be another. There are distinct differences between electronic and cyber-warfare units, although some formations offer both capabilities.

Electronic warfare is concerned with the use of the electromagnetic spectrum and denial to the enemy. EW units typically try to jam enemy communications or intercept them and disrupt the use of sensors. At its most basic, electronic warfare can be accomplished by broadcasting multi-frequency 'white noise' to swamp enemy devices but this is only effective at modest Tech Levels. The effectiveness of electronic warfare is greatly dependent on relative Tech Levels.

Electronic Warfare Specialists

To qualify as a specialist EW unit, a formation must meet the following criteria:

Skills: At least some personnel must possess skill level 3+ in Electronics (sensors).

Equipment: The unit must possess suitable equipment for conducting electronic warfare operations. This must be more than basic personal devices; typically an EW unit will require vehicle-mounted or installation-type equipment, which can conduct active electronic warfare over a wide area. This will include powerful jammers or transmitters.

Detection, Interception and Electronic Intrusion

In order to interact with an enemy's information system or communications network it is necessary to establish contact. In some cases this will be simply impossible or require specific measures. For example, messages carried by runners cannot be intercepted by electronic means – but of course the person carrying the message could be intercepted. Likewise, tight-beam communications such as lasers require extremely precise positioning of an intercept device and meson communications are virtually impossible to intercept. If the mercenaries (or their enemies) lack the means to intercept and interact, there is nothing they can do.

If information is transferred by some broadcast means, it can be detected by suitable equipment. Technology is a huge factor here; early radio systems are very obvious but as Tech Level advances signals become more directional, shorter and of lower intensity. Burst transmissions from a highly directional antenna may not be detected at all. Whilst technology is important, there is a large element of skill involved in successfully detecting emissions. It may be possible to position receivers where they can pick up a sidelobe from a directional transmission or make use of atmospheric conditions to locate emissions that might otherwise be masked.

In many cases a transmission can be analysed or even deciphered but nothing further can be achieved other than attempting to jam it. If, however, electronic warfare operators can interact with the message transmission and reception system it may be possible to intrude into the enemy's communications network. This may allow remote hacking of devices, which falls into the realm of cyber-warfare.

To detect a broadcast transmission, an Easy (4+) Electronics (sensors) check is required. The difficulty rises to Average (8+) if measures have been taken to conceal the transmission. This might include the use of directional transmitters, low-powered or burst transmissions and the like. Most of these measures fall under the banner of Low-Probability-of-Intercept (LPI) technologies. The check is also affected by the difference in Tech Level of the two systems. Even a basic civilian communications device has the capability to detect mid-tech radio transmissions. This is not a standard feature but with a little reprogramming and modification a crude emission-detection device can be produced.

Detection of a transmission permits analysis that can yield useful information but does not necessarily translate to the ability to gain information directly from the signal. Information gained from the characteristics of emissions is termed Electronic Intelligence or ELINT. At mid Tech Levels analysis of this information is performed manually but by TL9 an automated analysis unit is available, which can identify known signatures – such as that of a standard radar unit widely available on the open market – and make reliable inferences from the characteristics of less common systems. Making use of this information may require a check but the unit will feed information on the position and type of all emitters it has detected to the personal data devices of friendly troops, along with a probability of detection estimate based on their position.

Attempting to obtain information contained within emissions, such as orders or supply requisitions, is termed Signals Intelligence, or SIGINT. This is a much more difficult prospect than analysing the signals themselves. The signal must be decrypted and any missing parts somehow inferred. It is not uncommon for only part of a signal to be intercepted and above TL6 this is more than just having some of the words and numbers missing – it means parts of the data are not present, possibly rendering the whole signal indecipherable.

Making sense of an enemy signal requires signals analysis equipment and a Difficult (10+) Electronics (comms) check. As always the relative TL of the transmitter and intercepting device provides a DM to this check. Occasionally, data obtained elsewhere can greatly assist in the analysis of a signal. For example, if the mercenaries have somehow obtained the encryption key used by the enemy their task becomes much easier. Typically difficulty will be reduced to Average (8+) or even Routine (6+) by such data but there are always technical problems that might prevent a clean interception.

Spoofing and Jamming

Jamming a signal by causing it to be drowned out by white noise is an unsophisticated technique relying on the electronic equivalent of brute force. All that is required to jam a mid-tech signal is a more powerful transmitter capable of operating on the same frequency. More sophisticated signals may require matching to their characteristics or the use of a counter-signal to weaken target transmission by superposition of an inverse wave. Jamming a signal still requires some finesse, represented by an Average (8+) Electronics (comms) check with a DM equal to the difference in Tech Levels of the equipment in use and possibly a DM for the power of the jammer.

This sort of jamming is typically used to disrupt enemy communications, for example preventing direction of artillery supporting the front line forces or to blanket out control signals used by some weapons. If a missile has its own homing electronics, this requires specialist equipment to disrupt the internal signals or the missile's own sensors. Weapons controlled by signals from a launching vehicle or craft can be blanket-jammed in the same way as communications signals.

Jamming a self-guided weapon's guidance system requires more sophistication than blanket-jamming control signals. A suitable jammer must be available; one capable of emitting at the frequencies and intensities used by the weapon's guidance sensors. A successful Average (8+) Electronics (comms) check will permit interference in the targeting process, which may cause the weapon to lose target lock. As always this check is subject to a DM equal to the difference in Tech Levels between defensive and offensive systems. The Effect of this check is imposed as a negative DM on the guided weapon's attack roll.

Some weapons use composite guidance, typically radar and thermal homing systems, whose effectiveness is considered to be included in the Tech Level DM. Weapons that home in on emissions, such as antiradiation missiles or weapons that switch to a home-on-jam mode cannot be jammed in this manner. Indeed, they gain DM+2 to attack an active jamming system.

Jamming a signal makes it impossible to receive or indecipherable and can be highly effective, although ultimately it is obvious and produces a negative result. That is, jamming can prevent the enemy from communicating effectively but cannot be used to deceive with false signals. Doing so is termed 'spoofing'. Spoofing a signal requires a lot more finesse and better equipment than jamming but can have greater results. At its most basic, spoofing introduces legitimate-seeming signals, which confuse the device or receiver but in some cases false information can be introduced into a system.

For example, basic spoofing of an enemy sensor system may produce 'ghosts' and confuse the system about which contact is the real one. This is not particularly hard to achieve with the right equipment and is treated as a jamming attempt. A more sophisticated form of spoofing might convince the enemy's sensors they are not seeing an object or emitter that would otherwise be easily detected, or may deceive the enemy's sensors about what they are seeing. This might mean 'recognising' sensor emissions incorrectly and drawing invalid conclusions from them or believing an intruding grav speeder is a friendly aircraft.

Spoofing signals requires a proper electronic warfare suite and skilled operators. Typically, a Difficult (10+) Electronics (comms) check is required to carry out even

quite a simple spoofing operation such as causing enemy friend-or-foe systems to recognise the mercenaries' craft as a friendly. In order to introduce malicious code or information (known as an electronic warfare-delivered cyber-attack), a full intrusion into the enemy's data system is required. This will require a Formidable (14+) check. As always, Tech Level difference will provide a DM.

Cyber-Warfare in a Mercenary Campaign

If the mercenaries can penetrate an enemy's data network by some means, it becomes possible to engage in cyber-warfare. This is a vast subject, much of which is beyond the scope of a mercenary campaign. An enemy nation might be crippled by disruption of critical infrastructure, giving a mercenary unit a major advantage for a time but unless the Travellers are particularly interested in the minutiae of hacking and cyber-operations in general it is more likely to be a plot element in an adventure than an activity the mercenaries themselves are undertaking.

Mercenary units that employ cyber-warfare techniques typically use them to gain local and short-term advantages. For example, a unit might insert malicious code into the programming of an automated aerospace defence battery, taking it offline for a time. Attacks of this sort are never easy when tackling secured military systems of an equivalent Tech Level, however more primitive computer networks can often be taken down by a simple piece of standard code created for the purpose.

The Travellers should not be permitted to switch off an enemy army from their personal comms, even if the target's electronic security is so poor that this is possible. A mercenary campaign in which the Travellers can accomplish their aims from a swivel chair at a starport data terminal is unlikely to be interesting. Thus, unless the situation is relevant to the plot or the Referee has reason for extreme vulnerability to be present, it should be assumed that military hardware is firewalled, airgapped and otherwise compartmentalised. A cyber-attack will produce local effects only, which may be very useful in the tactical situation but rarely have wide-ranging consequences.

The exception is information theft, since this is an enabler for other activities. A cyber-attack that reveals the enemy's detailed invasion plans or the blueprints for their super-weapon may lead to all manner of adventures and missions and is an entirely acceptable part of a mercenary campaign. In short, cyber-warfare in a mercenary campaign should create opportunities, rather than providing a solution to a problem, and might backfire. The enemy might actually want plans for their impregnable fortress to be stolen, especially if its unobvious but critical weak point is actually a deception intended to draw the mercenaries into a trap or divert attention from some other flaw.

AUTOJAMMER

Produced at TL9, these inexpensive, self-contained devices are designed to be carried aboard a vehicle or placed on the ground near artillery. They can also be launched as an active decoy. The power cells aboard an autojammer are good for about an hour of full-power operation or several weeks in a ready state. The device is pre-set to recognise a range of signals and begin broad-spectrum electromagnetic jamming when detected. This is treated as an operator with skill level 0, with checks modified by Tech Level difference. Autojammers are a cheap way of disrupting the communications of mid-tech opponents and if used as a decoy may attract a home-on-jam or antiradiation missile, which might otherwise have caused damage to an important target.



Item	TL	Kg	Cost
Autojammer	9	3	Cr800

ELECTROMAGNETIC EMISSION ANALYSIS UNIT

A dedicated electronic warfare analysis unit consists of a detection unit with telescoping antenna and two small data-display screens separated by a keyboard. The whole package comes in at 1.5 kilograms and has a robust 'military electronics' case. In addition to providing all the functions of the handheld detector, the analysis unit automatically analyses signals received from its own antenna and fed to it from other sensors. Common emitters will be identified with 100% accuracy, with degree-of-confidence indicators for those whose nature has been inferred. Some basic additional information is also automatically presented such as the amount of radio-frequency traffic, patterns of activation for sensors and so forth.



Item	TL	Kg	Cost
Emission Analysis Unit	9	1.5	Cr1500

ELECTRONIC WARFARE SUITE, VEHICLE-MOUNTED

An EW suite consists of a small control area capable of supporting two operators (or a commander and an operator), along with sufficient antennae and transmitters to conduct electronic and signals warfare. Multiple units can be combined to create a larger capability or a suite could be carried aboard an

aerospace defence vehicle. An EW suite of this type is powerful enough to perform area jamming and provides sufficient coverage to allow a unit to consider itself an electronic warfare formation, although typically a specialist unit would have multiple suites.



Item	TL	Spaces	Cost
Electronic Warfare Suite	9	8	Cr35000
Electronic Warfare Suite	12	8	Cr75000

RF EMISSION DETECTOR

A simple detector for radio-frequency emissions can be constructed by modifying a civilian comm unit. The result is not pretty but will work well enough if all that is required is discovering the presence of emissions and their approximate frequency. This is accomplished by manual tuning and simply listening to the strength and intensity of the signal detected. Those wanting a little more sophistication can buy a palm-sized device that will passively scan for emissions, displaying and recording strength, direction, frequency and intensity. A simple analysis unit will give an indication of the type of transmitter based on its characteristics. Data is limited to vernal type such as shortwave communications radio, advanced band-skipping communications radio, radar or civilian phone or comm networks. Multiple units can feed data to a central analysis unit, enabling positions to be triangulated and data confirmed.



Item	TL	Kg	Cost
RF Emission Detector	8	0.2	Cr750

MISSILE, ANTIRADIATION, LONG-DURATION

Falling somewhere between cruise missile and drone in concept, a long-duration antiradiation missile can be used to strike at distant targets, following a low flight path using terrain cover to reach the general target area then loitering until a suitable emitter is detected. This enables the missile to defeat the gambit of turning off radars to protect them from this kind of attack. Once an emitter is detected, the missile compares it to the characteristics of desirable targets and decides whether or not to attack. In this way the operator can be selective about which radars to

attack, for example choosing to eliminate aerospace defence sensors controlling specific weapons. One common tactic is to put one or more missiles into the target area or over a suspected aerospace defence concentration ahead of an attack by aircraft or grav vehicles. When defensive radars are activated the missile is already close by and even shutting off the emitters will not prevent an attack. The missile gains DM+4 to attack an emitting radar or communications system and no DM to attack the 'remembered' position of one that has been shut down.



Weapon	TL	Range	Damage	Tons	Spaces	Cost	Magazine	Magazine Cost	Traits
Long Duration Antiradiation Missile	9	125	8D	0.5	2	Cr45000	—	—	Smart, One-Use

SECURITY AND INTELLIGENCE SPECIALISTS

The security side of mercenary work varies from small bodyguard units, to large armed security forces protecting major installations. Some security units operate in the counterinsurgency field or specialise in tackling armed and organised criminals. Larger units operate in the same manner as military forces, whereas a campaign built around a bodyguard force may more closely resemble a conventional *Traveller* campaign.

BODYGUARDS AND SMALL-UNIT SECURITY FORCES

Bodyguard units can vary considerably. At a minimum they must be able to provide a personal protection service, which may or may not be armed and demonstrate they have appropriate skills or experience. Some clients want big, muscly 'minders' to demonstrate their client's importance by shoving people out of the way and making a big fuss about their safety. Almost anyone can get this sort of job, which requires no real skills. Whilst playing to the ego of a self-important client can bring in a very decent wage, more professional bodyguards take an altogether different approach.

Security teams may include obvious close-protection personnel but as a rule the more important the client, the less obtrusive their security will be. A bodyguard team may have to conform to the expectations of polite society in order to avoid offending other important people with a crass display of thuggery or undermining the credibility of an important figure by acting like street toughs. Subtlety is also useful in terms of concealing the capabilities of the team – if a potential attacker does not know which members of an entourage are bodyguards and which are functionaries their task becomes harder and they may be entirely deterred.

A small-unit bodyguard team will usually be able to offer close protection services along with the ability to predict threats and clear areas ahead of the client's arrival. Combat skills are important but observation, investigation and related skills such as driving



and medical competence will also be considered desirable. A team of this sort will typically be armed with sidearms, with other weapons available at need, although depending on the local culture it may be entirely acceptable to openly carry longarms. When venturing into wilder areas, such as countryside that might harbour insurgents, open carry of powerful weapons is likely to be the order of the day.

A campaign based around this sort of unit is likely to resemble a conventional *Traveller* game, although it might have a military theme. For example, the Travellers might be hired to protect mediators or civilian aid workers during a conflict, with military operations as a backdrop to their adventures rather than a focus. The Travellers might specialise in guarding things rather than people, either as static security at an installation or experts in moving objects covertly or securely. A campaign based around a band of ex-military drivers delivering packages no-questions-asked could lead into some very murky waters whether or not full-scale military action took place.

Armed Security

The term 'armed security' is generally used to refer to paramilitary units providing security services in highly dangerous areas. Units of this type generally recruit ex-military personnel, although there may be room for Travellers with a background in law enforcement, medical or technical areas. It is not uncommon for military forces – mercenaries or government-owned – to operate from bases secured by civilian armed security. Armed security formations are also employed to tackle insurgencies and well-armed crime gangs where there is little or no threat of facing heavy military hardware such as tanks and artillery.

An armed security force is more likely to be organised as teams than to follow a standard military organisation. Equipment will include military small arms and possibly some support weapons, with vehicles optimised for security operations rather than heavy combat. Personnel will require infantry combat skills but may also need to be diplomatic in order to win over the local population or defuse incidents that might otherwise escalate.

The challenges facing a security force are different to those a military formation might encounter. They may well be working under law enforcement style rules of engagement rather than military ones and lack the legal protection typically available to lawful participants in a conflict. Armed security personnel must therefore tread carefully and may need greater reserves of patience than a combat force. A problem may be solvable using force but that does not mean it is desirable, especially when a client wants the level of violence to be reduced rather than simply crushing an enemy.

Armed Security Specialists

To qualify as a specialist armed security unit, a formation must meet the following criteria:

Skills: Personnel must have basic infantry combat or weapon-handling skills. The unit must also contain personnel with vehicle skills, Streetwise or Recon and Diplomat or Medic skills.

Equipment: Equipment can vary considerably but should be optimised for security operations. This typically means military small arms and a few light support weapons. Possessing tanks and battle dress would not make it impossible to operate in this role but few clients will pay the cost of such a unit where a few personnel with submachineguns would do.

Cordon and Sweep

One of the standard techniques used in counterinsurgency work and paramilitary law enforcement is termed 'cordon and sweep'. The basic principle is simple; an area is cordoned off and anyone trying to move out of it is detained for questioning. A security force then sweeps the area for insurgents, weapon caches or evidence. Finding anything (or anyone) of interest depends greatly upon the skill of the sweeping personnel, who may find themselves up against a resentful populace or complex terrain.

A sweep can go bad very quickly if the targets choose to fight instead of hiding and ambushes are a possibility. There is always a chance of encountering unrelated trouble, for example if the security unit are looking for insurgent weapon caches and the local crime gang fears their stash of illegal goods is threatened. Sweeps of urban areas are rarely straightforward, although rural regions are generally simpler to search.

Variants on the standard cordon and sweep operation can be used with a little creativity. One option is to discreetly set up a cordon then have the civil authorities order an evacuation due to some urgent circumstance such as a chemical leak. Those coming out of the area can be monitored and anyone suspected of involvement with insurgency or crime arrested. Security teams may also be able to search the area for holdouts or caches whilst the inhabitants are gone. Such a search may or may not be legal for law enforcement purposes but when dealing with insurgents this might not matter.

Cordon and Sweep Modifiers

Circumstance	Example	DM
Pre-existing intelligence on the presence of possible targets	A security unit doing its job properly will constantly collect snippets of information. A successful analysis leading to an Intelligence Event will provide a DM for a subsequent search.	+2
Bad information	If the Travellers' intelligence work has led to false conclusion or they have been given a deliberately false set of information, a negative DM is applied.	-2
Sensors and related equipment	The searching unit may use its Tech Level DM.	Varies
Hasty or cursory search	A cursory search may result from apathetic or fearful troops, or be necessary for lack of time.	-2
Search carried out in contact with the enemy	If an enemy force is conducting active resistance in the form of sniping or sporadic small attacks the search will be disrupted.	-4

The success of the search is also affected by how intrusive or downright brutal the mercenaries want to be. DM-4 to +4 can be selected and applied to ECEI for the search resolution check. However, an opposite DM is applied to determine the effect on relations with the locals. Thus if the Travellers start smashing in doors and ripping up floorboards using DM+4 they are more likely to find whatever is there, but will suffer DM-4 on the check to determine relations.

The outcomes illustrate the best that will be achieved and assume there is something to be found. A 'clean' area swept by a highly successful search will naturally yield far less than one harbouring a significant number of insurgents. Thus a solid success in an area where little is to be found will result in the most important objects or people, or everything if there is little, being found – along with a high degree of confidence that the area is now clear.

Search Resolution

2D+ Modifiers	Outcome	Details
0 or less	Failed search, badly executed	Absolutely nothing of use was found. In addition, the local population are given the impression that the searchers lack resolve or competence.
1–3	Failed search	Nothing of any real use was found, although there may be some unrelated finds. For example, a search for insurgents might accidentally uncover a stash or untreated stolen goods.
4–6	Marginally successful search	Some minor items or personnel are located, such as a couple of stolen guns or someone on a wanted list but of little importance.
7–9	Successful search	The search finds useful intelligence or some enemy personnel or equipment. No major finds are made.
10–12	Solid Success	The search finds a significant cache of equipment or intelligence, or locates enemy personnel of some importance or a base with a reasonable amount of personnel and equipment present.
13–15	Excellent Success	The search locates the most important enemy assets in the area and quite possibly everything else. A few remnants may escape the search but only at considerable cost. Such a sweep will break an insurgency in an area and make it difficult to re-establish.
16 or more	Perfect Success	The search finds everything of note.

Finding enemy assets on a cordon and sweep operation is just the beginning of dealing with them. Enemy forces might decide to disrupt and harass the search, or smash through the cordon and escape. A response might be made from outside the cordoned area or an unrelated group might think the operation is a threat to them and resist. Once enemy assets are found the mercenaries will have to decide what to do about them. The usual response is confiscations and arrests but there may be wider considerations. This is especially likely if the local population might be angered by removing persons of note or rounding up targets requires entering sensitive or holy areas.

Contact with enemy forces may be mandated by the Referee, and any incursion into insurgent-held territory is likely to result in some kind of incident as hostiles try to break out or are chased down. The reaction of the local population can be determined by using the Population Reaction table. The commander of the operation may make a Tactics (military) check to determine how diplomatically the operation is carried out. This will usually be of Average (8+) difficulty but may be lower or higher depending on the attitude of the population. Additional DMs apply for the intrusiveness of the search and possibly additional factors such as rabble-rousing against the mercenaries.

Ideally, a search of this sort is conducted quickly and discreetly, with as little contact as possible between the search teams and local residents. It is likely that some people will ignore an evacuation warning for various reasons and many of them will be entirely innocent. The search team may have to deal with resistance to their activities without being sure whether the potential opposition are disgruntled locals or active bad guys. An evacuation order might be given specifically to get the civilian population out of the way, enabling search teams to engage their targets without risking collateral damage.

Operations of this sort can yield good results if handled with discretion and diplomacy but tend to antagonise the local population if conducted in a heavy-handed manner. The commanders of a sweep operation can decide how intense the search is to be, but ultimately the outcome depends on the professionalism of the troops involved. There is generally a three-way trade-off between time taken, thoroughness and the maintenance of good relations with the local population. Of course, harsh and brutally conducted searches can be used to cow a population or punish support for insurgents. One potentially useful strategy is to use harsh searches in areas suspected of harbouring insurgents, but to tread lightly elsewhere. This gives the locals an incentive to report insurgent activity and assist the security forces, though it can backfire if clumsily handled.

Population Reaction

Effect of Tactics Check	Result
-6 or worse	Serious incident. Locals turn hostile. This may manifest as rioting and rock-throwing rather than active armed resistance but some of the population will eventually join the insurgency or begin actively opposing control of the area.
-5 to -3	Major incident, involving a potentially lethal threat. This may be petrol bombs and rocks or a shooting incident but has the potential to escalate into widespread violence.
-2 to -1	Considerable resistance and provocation, possibly with some low-level scuffles and violence. Non-violent opposition is also possible, slowing the search and perhaps enabling hostiles to escape.
+0	Sullen acceptance of the situation, probably accompanied by minor impedance and the occasional thrown object.
+1-2	Acceptance of the situation but no active cooperation.
+3-5	Acceptance of the situation, some minor acts of cooperation such as useful directions or information.
6 or better	Full cooperation, possibly with active assistance such as information on the presence of hostiles or their activities.

Before a sweep begins the Referee must determine if there is anything to be found and what level of opposition might be mounted. The Travellers, for their part, must decide upon a level of thoroughness and diplomacy. Sometimes it can be useful to conduct a 'weak' search. If the enemy thinks an area is safe because it has been recently been searched they may move important assets there and useful intelligence can be gained from noting which areas the local leaders object to being searched. Often these objections are entirely reasonable but the mercenaries' intelligence team may be able to discern a pattern, perhaps leading to covert observation or a stealthy investigation of promising sites.

A sweep can be abstracted using an ECEI check, with a positive result indicating success in finding insurgents or caches and any problems suggesting a difficult interaction with the locals or some other setback. The ECEI check is modified by a number of factors.

UMPHATHI CLASS SECURITY SLED, MILITARY VARIANT

The Umphathi is one of a series of semi-open vehicles used primarily for security and patrol work. Its name means 'steward' in one of the languages of Old Earth, reflecting the vehicle's usefulness in non-military security, field work and estate management roles. Sleds of this sort are sometimes used by ranchers or other outdoorsmen who may need to dismount to carry out minor tasks at frequent intervals. As such these vehicles can be found in use by surveyors, planetologists and conservationists as well as security forces. These occupations tend to favour the unarmoured 'field variant', which is often used as an alternative to an air/raft.

The vehicle consists of a central fuselage with a semi-enclosed recess for the pilot. Along the sides of the fuselage are running boards and bench seats facing outwards, which can be replaced with cargo containers at need. Personnel riding these seats are provided with a harness to prevent falling off in the event of violent manoeuvres but can attach these either directly to the seat or a reel of cable. An experienced team – be they checking geological sensors or searching for hostiles – can jump down from an almost-landed sled, carry out their task, then step back onto the running boards as the sled moves off. Less experienced observers are often horrified to see personnel leaning out from these vehicles, held in place only by one foot on the boards and a loop of cable around a hand but accidents are rare among a good team.

The military version has a lightly armoured fuselage but this protects only the internal systems and the pilot – and then not completely. A platform at the rear, surrounded by a support frame and a ring mount, allows a light support weapon to be carried if necessary. Typically this is a general-purpose machinegun but a compact autocannon is an option. Other systems are quite basic, since this is a low-cost solution to small-squad mobility rather than a serious combat vehicle.

Compartments within the main fuselage allow stores to be carried and in some variants are used to house additional systems. There are four personnel stations down each flank, any of which can be swapped for a 500 kilograms cargo box or equivalent. Conversion of these spaces to mount weapons or carry electronic systems would require redesign work and the services of a vehicle maintenance yard.

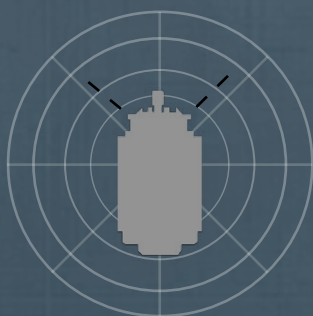


ARMOUR

FRONT 9

REAR 9

SIDES 9



UMPHATHI CLASS SECURITY SLED, MILITARY VARIANT

Autopilot (skill level)	0
Communications (range)	500 km
Navigation (Navigation DM)	+1
Sensors (Electronics (sensors) DM)	+1
Camouflage (Recon DM)	—
Stealth (Electronics (sensors) DM)	—

TL	9
SKILL	FLYER (GRAV)
AGILITY	+2
SPEED (CRUISE)	FAST (HIGH)
RANGE (CRUISE)	2,000 (3,000)
CREW	4
PASSENGERS	8
CARGO	750 KG
HULL	48
SHIPPING	12
COST	CR792500

TRAITS

Open Vehicle

EQUIPMENT

Autopilot (basic), Communication System (improved, encrypted), Control Systems (improved), Fire Extinguisher, Navigation System (basic), Ring Mount, Sensors (improved)

WEAPONS

—



INTELLIGENCE FORMATIONS

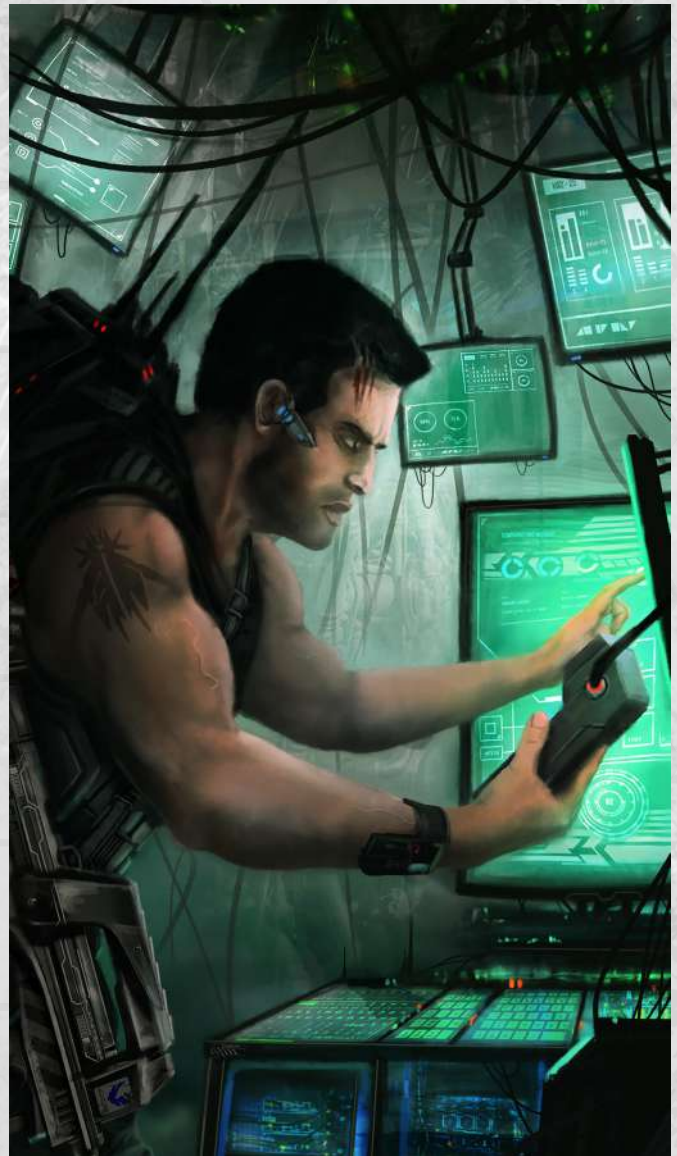
Specialist intelligence analysis falls under the banner of advisors and consultants, since these functions tend to be carried out by small groups of personnel operating at quite a high level in the military of the client. However, some mercenary units specialise in a rather more direct form of intelligence work such as seizing it from enemy installations. Such formations, are normally termed 'intelligence commandos'. In between the two are small field-intelligence formations which support and assist the forces of the client in their operations. It is not uncommon to find hybrid formations that consist of a reconnaissance element and an analysis element. These will refer to themselves as recon or intel units depending on their main focus and relative importance of the two elements. Those that mainly gather reconnaissance information and do some processing of it are recon formations; those that process their own gathered information but also work with data from other sources are primarily intel units.

Intelligence Commandos

Intelligence commando units face two main problems – the enemy and their own side. The enemy will of course present active and life-threatening resistance but their allies are just as likely to destroy valuable intelligence as the opposition. Soldiers involved in combat are primarily concerned with achieving their objectives whilst remaining alive and may not notice (or care) what might be important to the intelligence team back at base. Paper records are most vulnerable, especially in cold conditions, but all manner of critical information can be lost in a burning or shelled building and most front line troops are less than receptive to the idea they should take additional casualties by not firing on a command vehicle.

Intelligence commandos typically sweep into an objective in the late stages of fighting for it rushing to seize critical areas as opposition begins to collapse. They expect to have to fight and are equipped for it, but must also be prepared to resist attempts to shortstop and re-task them. The overall commander may consider the intelligence unit better employed in breaking enemy resistance or supporting the main attack and there are some circumstances where the intelligence mission must be abandoned in order to prevent an overall mission failure. However, an intelligence commando unit that allows itself to be side-tracked into general combat duties is denying its own purpose.

An intelligence unit may include personnel who are combat specialists and will also need a number of non-combat skills to be represented. These include the precise use of explosives, lockpicking, computer use and the like as well as the general ability to recognise what is relevant and what is not. An intelligence commando unit has room for people with a non-military background, so long as they can handle themselves in a fight. Safecrackers, hackers and scroungers are all useful to an operation, along with those who have specialist knowledge in a useful area or can think outside the usual military box and come up with ways to grab intel from the enemy.



Pinch Resolution

2D+ Modifiers	Outcome	Details
0 or less	Bungled Operation	The pinch fails entirely. An Incident occurs.
1–2	Failed Operation	The pinch fails to turn up anything useful. A Mishap occurs.
3–5	Poorly Executed Operation	The pinch turns up some information or items of minor usefulness in building up a big picture but nothing beyond what would normally be obtained from looking over a post-combat or post-operation site.
6–8	Successful Pinch, with complications	Some useful information or items are obtained, beyond what non-intelligence specialist troops might turn up. However, a Mishap occurs.
9–11	Successful Pinch	The pinch results in the acquisition of actionable intelligence or personnel of moderate to high value.
12–13	Expectations Exceeded	The pinch results in the acquisition of actionable intelligence or personnel of moderate to high value. In addition, an Opportunity arises.
14 or more	Excellent Operation	The pinch produces more intel than expected or seizes an unexpectedly important individual such as a visiting regional commander. An Opportunity arises.

Incidents, Mishaps and Opportunities are detailed on page 75–77 of Mercenaries in the Far Future.

Intelligence Commando Specialists

There are few formal criteria to qualify as a specialist intelligence commando unit, since these formations tend to be non-standard in organisation and do not fit a neat military mould. To be credible, a unit should meet the former general criteria.

General Capability: The force must have an overall average skill level of 2+ in relevant areas among its personnel to be considered an effective specialist unit.

Operational Capability: The force will probably be infantry or infantry with light vehicles. It must be agile and mobile, capable of moving fast in proximity with the enemy and overcoming pockets of resistance. Personnel will be armed with small arms of their choice and must be capable of using them effectively.

Specialist Capability: The force will need personnel with the Investigate skill at level 2+ and additional information-grabbing or problem-solving skills such as Mechanic, Electronics, Tactics and Persuade.

Making a Pinch

Seizing a useful piece of intelligence or pulling off a successful mission that yields an intelligence benefit is often termed a 'pinch'. This can be as minor as grabbing a few low-level documents or a real game-changer such as obtaining the entire pay and deployment records of a nation's military. Pinches can sometimes be made remotely by cyber-attack or result from snatching high value personnel when they are in a vulnerable location. This sort of operation is different from an intelligence raid and should be handled according to its nature. When intelligence commandos raid a site for useful intel, the system below should be used.

It is not always desirable for the enemy to know what has been taken – or indeed, if anything has been taken at all. For this reason, the commander of the operation should choose a DM between +0 and +4, representing how covert the pinch attempt is to be. This DM is applied positively to the Covert Operation Resolution table, if it is used at all, and negatively on the Pinch Resolution table. If the Travellers do not really care who knows what they found, they can undertake a simple smash and grab operation with DM+2 on the Pinch Resolution table but if this is the case the enemy's intelligence people will have a reasonably good idea what information or which personnel were pinched.

The results of the pinch are determined by an ECEI check. If the intelligence unit has the Sharp-Eyed or Champion Scrounger trait, DM+2 applies. Any negative DM for an attempt to make the pinch covertly is also applied – discretion often requires some potential opportunities be passed up. If the pinch is made in blatant fashion, DM+2 applies.

Once the results of the pinch are known it may be necessary to determine if the enemy knows what was taken. Typically an enemy that even suspects important codes are missing or plans have been stolen, changes will be implemented rapidly. However, some enemy commanders may be complacent even if there are reasons to believe the critical information is in enemy hands. Conversely, a force that has lost important data might conceal the fact to avoid punishment. A blatant smash and grab will always be obvious to the enemy but any attempt to be discreet permits the intelligence unit commander to make a Tactics (military) check with DM +0 to +4 as selected before the operation began. The difficulty of this check is normally Average (8+) but may vary depending upon circumstances.

This form of resolution can be used for other covert operations, such as smuggling a defector out of a hostile country or conveying information in secret.

INTELLIGENCE ANALYSIS UNITS

Units primarily concerned with intelligence analysis may not have a combat element at all, although they may have a security contingent. Some may be combined with a direct or remote reconnaissance unit or field operatives. The latter might operate covertly as spies or might be embedded with local forces. Intelligence analysis is discussed on page 35 of *Mercenaries in the Far Future*. The Referee can impose an Intelligence

Event whenever a significant amount of new data is garnered. This may create an opportunity to launch a mission at some newly discovered target or grant an advantage when engaging the enemy.

In addition, intelligence gathering and analysis will build up a 'big picture' of the enemy's capabilities, dispositions, doctrine and equipment. This ongoing analysis needs to be fed a steady stream of data, much of which is mundane. Observations from troops close to the enemy, describing equipment and vehicles, are highly useful although not of great individual importance. After-action reports, blueprints and specifications of equipment and all manner of other information are also important to this flow of data. Not all of it needs to come directly from contact with the enemy. The capabilities of an enemy tank might be determined by requesting a specification package from its offworld manufacturer, whilst an enemy commander's capabilities might be discerned from their profile on a third-party data site.

The amount that is known about an enemy force or nation is abstracted as the General Intel Indicator (GII), with low values indicating the Travellers have absolutely no idea what to expect. GII can be increased by routine intelligence gathering or specifically targeted operations.

General Intel Indicator

The level of information available about a subject begins default GII 0, indicating the Travellers are not aware of its existence or significance. Higher values indicate increasingly detailed information.

A basic intelligence analysis of readily available information allows an Average (8+) Investigate check. The Effect of this check +3 is the starting GII concerning a given enemy or situation. Further information can be obtained by reconnaissance or research.

Covert Operation Resolution

Effect of Tactics Check	Result
-6 or worse	The enemy knows exactly what was taken.
-5 to -3	The enemy has clear indications of what was taken, which are broadly correct.
-2 to -1	The enemy has a general idea of what information might have been taken but cannot be sure.
0	The enemy knows information or personnel were taken but cannot be sure if any given piece of information was compromised.
1-2	The enemy cannot be sure any information was taken.
3-5	The enemy suspects an intelligence operation has taken place but cannot be sure anything out of the ordinary has occurred.
6+	The enemy is unaware an intelligence operation took place. If the pinch accompanied an attack, it may be assumed this was a normal military operation and no significant data was compromised. A covert pinch might not be noticed at all.

Research is a matter of looking outside the combat area, at publicly available databases, datanet sites about military vehicles and the like, and compiling a database from known and likely enemy equipment. For every 1D days of research undertaken by an analysis unit, an Average (8+) Investigate check can be made with DM-1 for every point of GII above 5. The Effect of this check is added to GII if positive. If a negative Effect results, no further information can be obtained by research.

Reconnaissance can provide an unlimited amount of information about an enemy force. The Travellers must set up a suitable reconnaissance mission and execute it successfully – essentially creating their own adventures. A successful reconnaissance allows an Average (8+) Investigate check with DM-1 for every point of GII above 7. Success indicates +1 is added to GII. A failed recon mission adds nothing but does not prevent others from being carried out. The Referee may apply additional DMs based upon the value of the recon mission – grabbing a sentry for interrogation will not yield much information about the enemy's invasion plans but a covert reconnaissance of their marshalling areas could yield a wealth of useful information.



GII Values

GII	Information Available
0	None. The Travellers may not even be aware the subject exists.
1	The subject is a known name or vague concept.
2	Basic information such as 'the Hivlan Freedom Front is some kind of insurgent movement concerned with the Hivlan region'.
3	Some general information, such as 'the HFF is a moderate-sized insurgent movement involved in a long-running dispute with the planetary government. It is not thought to be well equipped or very dangerous'.
4	General information such as 'the starport at Hivlan has a permanently assigned security detail and some aerospace defences, of unknown strength'.
5	General information with some details, such as the sort of equipment used by the HFF or the number of obvious aerospace defence emplacements around the starport.
6	Fairly detailed information, such as a rough estimate of the number of armoured vehicles operated by the government forces fighting the HFF and their general type.
7	More detailed information, such as the specific models of armoured vehicles in use by government forces or the location of major installations.
8	Detailed information on force sizes (company-equivalent, battalion-equivalent and so forth) and their general locations as well as equipment in use.
9	Some specific information such as identities of units, up-to-date positions and movements of forces.
10	Considerable specific information allowing the activities and equipment levels of a specific unit to be tracked and analysed.
11	Detailed and specific information on the capabilities, activities and equipment of the enemy force.
12	Some secret or restricted information such as classified operations and general plans.
13	Considerable secret or restricted information on the enemy's dispositions, equipment and plans.
14	Near-total access to all data concerning the enemy and their plans, in near real-time.
15	Near-total real-time access to all data concerning the enemy.

STARMERCS

Starmercs are probably the most glamorous of all mercenaries – at least, to outsiders. They are distinct from units that make use of starships for mobility in that their ship is an integral part of their operation. Some starmerc units are specialists in one area, others able to switch between roles at need and some of the less reputable outfits stray back and forth across the line between raiders or pirates and legitimate starmercs paid to protect against them.

Starmerc units include purely naval formations crewing a warship or paramilitary vessel. These units typically take escort and commerce-protection missions or hunt pirates for a bounty. They may also be hired by clients wanting to create or augment a navy. Mercenary vessels tend to be relatively small, so when working with a major navy they are assigned as escorts, pickets or support for logistics vessels and troop transports. Minor naval powers may consider a mercenary ship to be a significant combat asset, sometimes resulting in what is disparagingly termed a 'boat war' fought by small warships and armed merchants.

Mercenary vessels with a significant troop complement are more flexible in terms of the jobs they can take but the high overheads associated with operating a starship mean that a starmerc platoon costs enormously more to hire than one without a ship. As a result starmercs typically act as strike or commando forces or carry out tasks that less mobile mercenaries could not tackle. These tend to be high-risk, big-fee missions such as raiding a suspected pirate haven or seizing control of a small installation.

Starmerc fee structures are calculated differently to those for planetside forces. Usually they are based on the cost of hiring the ship and its crew, including any complement of troops, as a single unit. The client is not concerned with whether the troop contingent has 15 marines or 17; what matters is that the unit as a whole can get the job done. Thus staffing levels are an area where a starmerc unit can increase its profit margin at greater risk of failing a mission or play safe and over-staff its combat force and cut into the profit margin.

STARMERC CAMPAIGNS

A starmerc campaign can be extremely varied and need not revolve entirely around completing tickets. Starmercs can engage in speculative operations of varying legality. Pirate-hunting for bounties is an honourable occupation, although some less reputable starmerc outfits will engage in piracy and raiding between jobs. This can generate revenue in its own right but may be part of a wider strategy. A series of raids in a region might make the owners of installations and starships start seeking extra security in the form of mercenaries, generating legitimate jobs so long as the starmercs can conceal their involvement. Extortion is another option in these circumstances.

These activities are little different to the sort of thing starmercs are hired to prevent and likely to attract other mercenary units to halt them. If word gets out that a unit is hopping back and forth across the line, they may become unattractive to many clients. However, in some regions mercenaries are expected to behave this way; nobody will be surprised if a unit turns out to be a bunch of criminals or pirates. Under such circumstances it can be difficult – and perhaps pointless – for a mercenary unit to try to behave honourably. Betrayals are likely and trust will be hard to earn, whilst local navies will be inclined to assume mercenaries are potential pirates.

A starmerc unit that behaves discredibly may be able to outrun its reputation, a luxury not available to more conventional formations. However, the converse can be a problem – a unit that moves around a lot will not benefit from having built up a solid reputation nearly so much as one that operates in the same region for its entire career. Information will be available to those who want it but mercenaries who want to build a brand identity will encounter difficulties.

Legalities can be a problem for starmercs in some areas. A mercenary unit can stow its weapons in shipping crates but an armed ship is a different proposition.

Proper licensing and documentation will reassure most port operators and security services but there will always be some unwilling to allow heavily armed outsiders to enter their territory. This may be due to legitimate concerns but there is always a possibility that opponents of the mercenaries or their client might throw legal obstacles in the way. A starmerc ship that cannot reach its area of operations is nullified just as effectively as one defeated in battle.

Starmerc personnel are more varied than those of groundside units. Combat troops will likely have a military background, of course, but ship crews might be recruited from a variety of sources. This can lead to problems, as some personnel may have come by way of a convoluted and not easily verifiable route. Recruiting former naval or merchant-line crewmembers virtually guarantees the candidate will be who and what they say they are and capable of performing their tasks. Independents might not even have formal qualifications and whilst that may not matter to the mercenaries who depend on results, not paperwork, it can cause problems with the authorities.

Starmercs might get involved in conventional *Traveller* adventures in a way that would be unlikely for a regular groundside unit. It is always possible for elements of a force to become involved in an adventure but an entire lift infantry company travels in a manner that precludes a lot of typical adventure situations. Starmercs, on the other hand, are not all that different to a typical free trader crew – at least in terms of where they go and how they get there. It may be possible for the Referee to involve a small starmerc force in almost any adventure, although the experience they have might be quite different to that of a typical band of Travellers. Arriving at a spooky, remote research station that seems to be abandoned might well trigger a military-style response from the mercenaries... which might or might not be the right approach.

Overall, a starmerc campaign is perhaps the most flexible of all mercenary-themed *Traveller* games. The Travellers can move back and forth between mercenary tickets and heavily armed adventuring. This makes starmercs a good choice for Travellers who are not sure if they want to wholly commit to running a military unit. The force, if it contains a sufficient ground-combat contingent, can take conventional mercenary contracts providing the client is willing to cover the starmerc vessel's resting costs.

There are many side adventures to be had by a force that travels the spaceways between contracts and a sufficiently imaginative band of Travellers will always be able to find ways of making money. Indeed,



mercenary work might be a means to an end rather than the Travellers' main occupation. If they can make more doing something else, they may decide to get out of the mercenary trade entirely and take the campaign in a new direction. There will always be conflict, of course, and clients willing to pay for protection or muscle. So long as they do not lose their edge or destroy their reputation the Travellers will always be able to return to the starmerc life.

HIRING STARMERCS

Starmercs are expensive and unlikely to be hired for missions that do not require a spacecraft or starship. A primarily groundside contract would normally be offered to a conventional force, with transportation

Starmerc Force Levels

Force Level	Force	Example	Per-Month Fee
0	Detachment	A handful of groundside personnel with some kind of interplanetary or interstellar transportation.	MCr0.01
1	Platoon	A force up to platoon size of groundside personnel with adequate interplanetary or interstellar transportation.	MCr0.025
2	Craft	One or more small craft with crews, totalling less than 76 tons.	MCr0.1
3	Squadron	Two or more small craft with crews, totalling less than 149 tons.	MCr0.25
4	Small Vessel	A small interplanetary or interstellar vessel of no more than 249 tons or a group of craft of the same tonnage.	MCr0.5
5	Corvette	A vessel in the 250–499 ton range.	MCr1.5
6	Reinforced Corvette	A vessel in the 500–899 ton range.	MCr2.5
7	Frigate	A vessel in the 900–1,299 ton range.	MCr5
8	Reinforced Frigate	A vessel in the 1,300–1,999 ton range.	MCr7.5
9	Flotilla	One or more vessels in the 2,000–2,999 ton range.	MCr12.5
10	Reinforced Flotilla	One or more vessels in the 3,000–4,999 ton range.	MCr20
11	Special	Over 5,000 tons of vessels and their associated forces.	Varies

provided as necessary. A groundside force that owns a starship and uses it for transportation may or may not be considered a starmerc outfit. If the ship is used to move the unit and perhaps bring in supplies but is not an integral part of the force's operations then it is considered a transport asset. Under most circumstances this unit will hire out for the cost of its fighting elements, plus expenses. This is important, since the ship is not expected to go in harm's way and damage to it may not be covered by the client.

If, on the other hand, use of a starship or spacecraft is integral to the unit's operations then it is considered a combat asset and the contract may well include a repair clause. This line between starmerc and conventional operations can be hazy in places but as a rule if a unit is conveyed to a world then operates groundside it is not undertaking a starmerc operation. If it must hop between locations or otherwise requires its starship to be closely involved, it can be considered a starmerc operation.

Not all starmercs are warfighters or raiders. There are units that specialise in posing as a free trader crew to obtain intelligence data or provide specialist support as a hospital ship or mobile command centre. Fees for starmerc operations are usually based upon an estimate of the capabilities required to complete them rather than the specifics of the unit. Two small starships might be more or less effective than one larger unit but the mission fee will be the same no matter what force mix is brought to bear.

Starmerc Force Levels

When calculating a fee for starmerc missions, the Referee must consider the estimated force level required to complete it. If the mercenaries can manage with smaller forces they will have higher profit margins but may take more damage in the process. Some missions are unviable for forces over a certain size but could be handled by a detachment – or the force might accept effectively making a loss on the job as less painful than losing money sitting around in port.

Each force level is associated with a basic per-month fee, which is modified by the nature of the mission to be undertaken.

Typically, a mission fee is based on an expected time period, which will be at least one month. The fee is usually structured as an initial payment and a completion payment. Details such as who pays for fuel and munitions are negotiable but typically a client will expect the job done for the agreed fee with no complications like accounting for fuel. Mercenaries are typically responsible for repairs to their own vessel, although a deal may be sweetened with a support or repair clause. Fees are further modified by the mission type. Time required to get to and from the mission site is usually excluded from the fee – the mercenaries are responsible for costs and time associated with getting into position to do what the client is paying for. However, this is negotiable.

For example, a client wants to hire a starmerc unit to conduct armed customs patrols near their holdings in a remote system. It will take two weeks to get into position and afterward the unit may have to relocate. The client wants a vessel in the corvette range or equivalent assets. The contract is for an eight-week deployment with some possibility of combat. They envisage a starmerc-crewed patrol corvette or similar vessel but would be satisfied with a heavily modified free trader and scout/courier if they seem capable of getting the job done. Two months' hire at the corvette rate comes to MCr3, which the client offers as MCr1 at the start of the contract and MCr2 at the end. Seeing the ships on offer, the client decides to reduce their offer by 20% but agrees to pay one week's additional hire to offset transit times. The mercenaries agree to undertake the contract and receive MCr1 (MCr 0.8 for 80% of the up-front fee, plus one additional week's fee at MCr0.8/month) plus MCr1.6 at the end of the contract (80% of the original end-of-contract fee). The mercenaries must make their own arrangements for fuel and munitions, and will not be paid to relocate at the end of the contract.

Starmerc Missions

Starmerc missions fall into two general categories – those conducted primarily groundside and those that are purely spaceborne. Most units are skewed towards one or the other. For example, a vessel conducting customs and security checks needs a ship's troops contingent but will not require the same force level as one hired to land at suspected pirate bases and force an entry.

Warfighting missions are rare and usually – but ironically not always – hazardous. A starmerc unit may be hired to join other space combat assets, which may be owned by the client or hired to form a composite mercenary force. Such formations are rarely as effective as a government's navy so tend to be deployed in support of other forces or to free more potent units for a direct combat role. Warfighting contracts can be surprisingly quiet or hair-raisingly dangerous, often depending on factors beyond the mercenaries' control. Operations will be 'naval' in nature, seeking out the enemy or standing on the defensive against their attack. Combat and ship damage are likely. Warfighting contracts typically include a 25–50% increment in payment or a combat bonus.

Escort missions are defensive in nature. Typically the mercenary force is assigned to escort a specific vessel or group of vessels, or to carry a valuable item from one place to another. Payment is generally on a success-only basis, although a credible defence of the subject will usually win the mercenaries a portion or even all of their fee. Escort missions might take place during a war, such as when mercenary vessels are hired to

protect troop transports or logistics assets, or may be directed at protecting against piracy and lawlessness. A variant on this mission type is the active-escort contract, where mercenaries are hired to protect traffic along a given route at their discretion. Mostly this means escort duty but a foray against a known pirate base in the area may also serve to increase security and would be considered valid. Active-escort contracts typically pay 10–25% more than standard as they require finer judgement and discretion.

Security and Guardship missions are similar to one another. A guardship is deployed at a specific point, such as in orbit over a sensitive world or patrolling close to a starport, whereas a vessel on a security mission might move around more. In general, the term 'guardship' implies a military role whereas 'security' suggests more involvement with customs inspections and control of traffic. In practice, the terms are used interchangeably by many clients, so starmerc units learn to be careful in obtaining definitions from the client. Both types of deployment tend to be long in term and in-case-something-happens rather than having a specific success requirement. Contingency orders are common, however, and can be unrealistic. Again, mercenaries learn to tread carefully around clients who are vague about exactly what they want. Security and guardship contracts tend to be standard in terms of payment.

Hunter contracts can be general or specific. Most hunter contracts are directed at a single ship or known hostile group, such as pirate vessels operating in a specific group of systems. Hunter contracts can also be a euphemism for commerce raiding, made arguably legal by the issue of a letter of marque. Typically a starmerc force on a hunter contract is sent out to seek and destroy the target, with bonuses payable for enemies destroyed. This kind of contract differs from a strike mission in that it is much more freeform; a starmerc unit may have to obtain information or search for a long time to find its prey or might use subterfuge such as deploying a Q-ship. If the results are not to the satisfaction of the client they may try to weasel out of paying the starmercs' fee. It is not uncommon for units to be accused of pocketing the mission fee and loafing about in some spacers' bar for a few weeks or of taking other work whilst they are supposed to be diligently searching for the client's desired target. Disputes are rather common, although if at least some results are gained the client will often pay with good grace.

Strike contracts are specific orders to capture or eliminate a particular objective. This is usually an installation, although specific ships, individuals or items might also be targeted. If the target is a ship, the strike contract differs from a hunter mission in that it

is targeted on a known location and particular objective rather than being a search-and-destroy mission. Fees are usually success-only or a partial fee on contract and a much larger amount on successful completion. Strike missions are less open-ended than hunter contracts and generally offered after the client has obtained good information on the target rather than expecting the mercenaries to generate their own. A strike need not necessarily be a mission of destruction; the client may want a person or installation captured intact.

STARMERC TICKETS

Starmerc tickets vary considerably. The following examples can be used as templates for other missions or amended to create additional mission ideas. Some could be tackled by a non-starmerc group, in which case the fee would be the same. However, a group without their own space vessel(s) might have to overcome transportation problems that could make the job impossible or unviable.

EXTRACTION TO EXILE STRIKE, DETACHMENT.

CR125000. Success Only.

Maxime Ulvesten is a well-known rabble-rouser who has stirred up a great deal of trouble on various worlds. He is an opponent of certain corporations, which he considers to be rapacious in their industrial and economic endeavours. As a result of his leadership several minor environmental and workers-rights groups have begun to form an alliance, which could impact the profitability of the firms in question. Without him the movement will probably fall apart.

Ulvesten makes a point of travelling as cheaply as possible aboard independent merchants, cargo ships and free traders. By doing so he is making a point about glitzy corporate vessels or so he has repeatedly stated. More importantly, he is travelling without bodyguards aboard a vessel unlikely to have much in the way of security. An interception at a starport might be difficult but on the run-in to orbit the vessel will be vulnerable to a quick snatch operation.

The affected corporations are offering Cr125000 to snatch Ulvesten and hand him over to a contact who will arrange transportation to a distant location. By the time Ulvesten gets back into the political fray his work is likely to have been undone. The mercenaries will be required to intercept Ulvesten's ship as it approaches orbit but the details of how they achieve the snatch are up to them. Ulvesten is to be delivered alive and well, and collateral damage is to be avoided.

Referee's Summary

Forcibly boarding a starship is considered piracy by most governments but a veneer of legality is available from the corporations. They have jointly declared Ulvesten a 'malicious actor', a term more commonly used for the forces of an opposing corporation or government in a trade war. Since trade war is legitimate if properly declared, Ulvesten can be presented as a legitimate target and those harbouring him de facto enemies of the corporation. This legal device might be used to browbeat the crew of Ulvesten's ship into handing him over and will create enough legal obfuscation to avoid prosecution for the mission.

Alternatively the Travellers might use force, the threat of force or some kind of deception to get aboard the ship. They might fake a distress call or make a stealthy approach, or could take some entirely different course of action. What matters to the client is that they grab Ulvesten and do not cause a bloodbath. The Travellers are expected to make their getaway in a spacecraft, break contact or evade pursuit and rendezvous with a vessel operated by the client once they are clear.

The client is keen to avoid bloodshed. They do not need to create a martyr and would face lawsuits if the mercenaries acted too aggressively. If the mercenaries were to defend themselves whilst 'legitimately arresting a malicious actor in a trade war station' the corporations would avoid too much bad publicity and could bat away lawsuits but wanton carnage aboard a private starship is another matter. If the Travellers do hand over Ulvesten, he will eventually return to the region. Chances are he will be resentful and as noisy as ever but unharmed. It is even possible the corporations might persuade him to change his viewpoint but that is a long shot and beyond the Travellers' remit. All they are being paid to do is get him off the stage for a while.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Take Maxime Ulvesten into custody, alive and well.
2. **IMPORTANT:** Do not cause casualties or damage except in self-defence.
3. **ROUTINE:** Avoid contact with law enforcement or system security personnel.
4. **ROUTINE:** Portray the operation as a legal and lawful trade war action against a malicious actor.
5. **ROUTINE:** Do not take any serious or fatal casualties.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has one Critical, one Important and three Routine criteria, giving a maximum TSI score of 13. The client or the authorities may instigate an investigation at which evidence gathered by way of personal or gun cameras and the like could be critical.

Administering Extraction to Exile

There are all manner of ways the Travellers can go about this ticket and a great many ways it can go wrong. The Travellers will be told when the ship is due, and its course will be predictable, but beyond that the planning is up to them. The free trader crew are typical spacers; they have a few guns and will defend themselves if they have to but will not fight to the death for a passenger – especially if they have been led to believe this is a legitimate arrest.

Speed, deception and psychological pressure are the Travellers' best tools here, with their guns as an intimidation tool. If the mercenaries can put the crew in a weak position and do not give them a chance to think they will not cause much trouble. On the other hand, there is a limited window for extraction. Becoming bogged down in negotiation or an armed standoff could force the Travellers to retreat or resort to direct methods. The Referee should make sure the Travellers understand they have been hired to use force in a precise and targeted manner and not to simply blast their way to an objective.

POUNDING THE ROCKS SECURITY, PLATOON.

Cr400000. Possible Bonus.

Claims registry in the Derrad Belt is handled at the main starport, Derrad Port, or rather it is officially handled there. In reality many prospectors 'register' their claims by simply noting them on the system's datanet. This worked well enough when the belters of the system were willing to respect one another's claims but the situation has become chaotic and at times violent. Some groups will only recognise claims properly registered at the port and are willing to legally claim-jump, which has offended the main belter community to the part that a low-level civil war has been developing for some time.

The 'legalists', as they have been dubbed, are not doing anything illegal by ignoring 'community' claims, although sometimes their methods are little short of banditry. The situation has created a major problem for the port authority, which lacks the funds to effectively police the belt and is losing revenue as more and more belters

ignore the claims registry process and its associated taxation framework. On the other hand, those belters who recognise the port's claims system are generally doing so for their own gain and likely to provoke a direct confrontation between the port and the wider community. The port's governors are acutely aware that the community can survive, after a fashion, without the port but the converse is not true.

The port authority is offering Cr400000 for a platoon-sized starmerc unit with its own interplanetary transportation to remedy the situation. The unit is to visit claims that have not been registered at the starport and impress upon those operating them the importance of doing so. The mercenaries will take claims registry on the spot for a nominal Cr1 and downplay the taxation aspect. They are to impress belters with the level of force they represent and ensure the belters know the port authority will protect their claims once properly registered. Conflict is not expected but there is significant resentment among the community so anything is possible. The mercenaries will remain in the belt for two months before returning to the port. Additional contracts may follow.

The fee will be paid 30%/70% at the beginning and end of the operation, with a possible bonus for efficient work and restraint in the face of provocation.

Referee's Summary

The mercenaries are acting in the role of armed diplomats rather than soldiers here and may have to deal with mistrust and a generally belligerent attitude. Confrontations are likely and the client will not be pleased with a unit that uses force unnecessarily or in a heavy-handed manner. The mercenaries will also face opposition from legalist groups who feel they are being betrayed by the port authority and it is here that the greatest likelihood of conflict exists.

At some point during the contract the mercenaries are contacted by a belter group that challenges them to put their money where their mouth is. An armed band of legalists has occupied a lucrative mining site and run off the independent belters. They are quite numerous, with around 60 effectives if they decide to fight, and equipped with civilian small arms. Whilst entirely capable of dealing with an equally disorganised and ill-armed band of belters, the legalists are not in any way a military force.

The situation could be resolved through negotiation and threat of force but feelings are running high and there is a real chance someone will start shooting or refuse to accept a blatantly untenable situation. If so, the mercenaries will have to use force. They are quite entitled to do so and will be expected to by the belter community. The client will be happiest with a negotiated resolution or a surgical use of force to arrest ringleaders or

demonstrate the hopelessness of the situation, whereas a bloodbath might make the situation worse. However, it is the mercenaries, not the client, who are under fire and the decision of how to proceed is theirs.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **IMPORTANT:** Demonstrate to the belter community that the port authority can and will protect their properly registered claims.
2. **IMPORTANT:** Do not cause casualties or damage except in self-defence.
3. **ROUTINE:** Resolve the legalist/belter standoff in some manner.
4. **ROUTINE:** Be seen to be impartial but strict.
5. **ROUTINE:** Treat the belter community with courtesy and respect, even in the face of provocation.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has two Important and three Routine criteria, giving a maximum TSI score of 12. The client will pay up to 10% bonus if the mercenaries make good progress in re-establishing its authority over asteroid mining in the belt and do not cause deepening of the existing rifts.

Administering Pounding the Rocks

Security tickets are often an exercise in patience and restraint, typically in the face of provocation. Both groups feel they are in the right and the situation has gradually escalated to the point where there are entrenched camps on both sides. There are also a great many people – some pro-port authority and some not – who just want to get on with their lives. Most legalists would be happy to leave the beltters alone but the situation is inflamed by aggressive profiteers who realise they can watch for a good strike then muscle in without breaking any laws.

It is these few groups that are at the heart of the problem, although the beltters' increasing contempt for the port authority is a factor too. Overall, the situation is best resolved by demonstrating the capability of the port authority to govern the belt without inflicting casualties that will increase ill-feeling on either or both sides. That might be easier said than done, and a trigger-happy mercenary group might settle for a heavy-handed approach that drives the beltters into revolt. If so, they will be contracted to put it down. This might be lucrative for the mercenaries, but units that behave this way eventually gain a reputation for causing more problems than they solve.

Q-BOAT ESCORT, CRAFT. Cr125000. Cr50000 Bonus.

Dominion Interplanetary operates a service from the mainworld to various outsystem installations and communities. Its vessels are non-jump-capable freight and passenger haulers, which follow predictable routes due to the orbital mechanics of the various bodies they visit. Deviating much from these routes would greatly increase transit times and cost the firm money. However, predictability plays into the hands of criminals who have come to prey on the freighters.

The criminals do not appear to have a political agenda and seem well aware that destroying vessels or forcing a slowdown in service would affect their own bottom line as well as that of the company. However, they are becoming increasingly blatant and have recently begun demanding a 'transit fee' to allow Dominion ships to operate in the outsystem unhindered. The company has decided that 'hardening' its shipping fleet is too expensive but does not want to be caught in a cycle of extortion and bribery. Deterrence seems to be the answer. Some of the company's fleet of in-system transports will be converted into temporary Q-ships by the addition of a couple of concealed turrets and a small craft launch bay.

The board of directors has authorised a mercenary operation as proof-of-concept and will make available funds to convert several ships if the operation succeeds. The underlying idea is that if the raiders cannot know if they are walking into a trap or not they may desist in their raids, which have been made with minimal resources to date and rely upon hitting a soft target.

Dominion Interplanetary is offering Cr125000 for the crew and any supporting staff of a small craft or group of them totalling 75 tons or less to be carried aboard one of its vessels. In the event of an attack the mercenaries will operate concealed weapons aboard the parent ship, resist any boarding attempt and destroy or capture any craft used in the attack. Ideally, at least one of the raiders' vessels will be destroyed or captured and to this end the mercenaries are expected to conceal their presence until the last moment. A bonus of Cr 50000 is payable if a significant hostile vessel is eliminated in this way.

Referee's Summary

Dominion Interstellar operates a fleet of old subsidised merchants and far traders, which have been stripped of their jump drives to create more cargo space. Most vessels are unarmed, or have a token laser, and have been forced to surrender to lightly armed small craft. Cargo losses were acceptable until recently but a combination of the demand for a 'transit fee' and the refusal of clients to pay for passage unless protection is guaranteed has forced a robust response.

The company wants to give the raiders a shock and demonstrate the concept of Q-ship deterrence to its own board members. The plan is entirely workable so long as secrecy is maintained and there are unlikely to be leaks at the Dominion end. Modifications to the selected vessel might be spotted if the mercenaries are lax about security at some of its ports of call, in which case the raiders will either escalate their force or – more likely – allow the vessel to pass unmolested and attack a softer target.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Inflict a defeat upon the raiders.
2. **IMPORTANT:** Maintain security during the voyage.
3. **ROUTINE:** Obtain evidence to demonstrate the effectiveness of the measures to the Dominion board.
4. **ROUTINE:** Work with the freighter's crew to establish solid protocols that will be used by later missions.
5. **ROUTINE:** Do not take any fatal casualties.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has one Critical, one Important and three Routine criteria, giving a maximum TSI score of 13. The bonus is payable for inflicting a defeat, at whatever cost to the mercenaries, but may not cover the cost of replacements.

Administering Q-Boat

It is likely the Travellers will pass through several small settlements before an attack occurs. They may not even think of making sure the local population are kept from closely examining the vessel and the crew will certainly not. The mission could be derailed by such an oversight but there is time to make more than one voyage if necessary. Eventually an attack might be drawn in.

The likely form of an attack is a couple of small craft with jury-rigged weapons, making a demand for cargo to be dropped on an asteroid surface or for the ship to surrender to a boarding party. The vessel is equipped with two pop-up turrets, which can deliver a nasty sucker-punch to the attackers but the nervous crew may want to deploy them too early. The mercenaries will need to manage the deployment and the launch of their own craft, with care in order to obtain maximum effect.

WARFIGHTER SQUADRON WARFIGHTING, SQUADRON.

MCr1. Possible Bonuses.

The gas giant Suellia is the only conveniently located refuelling point in its system, which is otherwise of little value. For decades vessels passing through the system have called at one or another of several small outposts, which provided fuel and a few basic needs, and in return made a modest income. This was sufficient to fund a mineral extraction and petrochemical skimming operation, supporting a rough-and-ready civilisation among the gas giant's moons.

Recently a major shipping concern has moved a mobile refuelling installation into orbit, wiping out the local economy at a stroke. The installation has been sufficiently profitable that the construction of a permanent starport has now begun. Some of the moon-cities have already signed up to become part of a corporate state based around the new port but an alliance has emerged among the others with the intent of driving the corporate presence from the system.

The Free Suellia Alliance is offering MCr1 for a starmerc unit with its own armed small craft, ideally fighters, to harass shipping using the port and to strike at vessels sent against alliance strongholds. The contract is to run for four months, with a bonus payable for any hostile craft destroyed. This is a limited conflict, since the alliance does not want to alienate the interstellar community at large, so the mercenary force will be cleared only to engage armed or hostile vessels. Civilian shipping is to be harassed, intimidated and generally interfered with in a non-lethal manner.

Referee's Summary

This is a very small war, fought among the asteroids of Suellia's ring system or around the refuelling installation. The latter is too well armed to attack directly and the alliance does not want to harm innocent spacers. Instead they hope to draw out the installation's own defensive small craft and defeat them, or eliminate its supply ships. Fuel shuttles skimming from the gas giant are another potential target, although this will mean defeating the escorts. The intent is to make the corporate takeover of the system unviable rather than defeating the corporation head-on, which may be impossible.

The corporate forces consist of a handful of fighters and armed launches, unarmed fuel shuttles and a single 400-ton system defence boat that never moves far from the installation. If that were to be disabled somehow, the installation's own defences are not so strong that it could not be forced to surrender by a suitably powerful

force. The alliance does not possess one but could put together a few armed small craft of its own if the mercenaries can provide leadership and training.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Prevent the capture of any alliance strongholds.
2. **IMPORTANT:** Force the withdrawal of the mobile refuelling installation.
3. **IMPORTANT:** Avoid harming uninvolved interstellar traffic.
4. **IMPORTANT:** Harass traffic using the installation.
5. **ROUTINE:** Do not lose any craft to enemy action.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has one Critical, three Important and one Routine criteria, giving a maximum TSI score of 15. Criteria 2 and 3 may seem contradictory but they are not – to achieve the alliance's aims it will be necessary to harass merchant traffic and cause its captains to realise using the corporate station will cost them time and money, yet at the same time avoid causing actual harm.

Administering Warfighter Squadron

Initially, the installation will respond to harassment in a defensive manner, putting out fighters or launching the odd missile to see off intruders. If the Travellers succeed in making themselves a real nuisance or down some of the fuel-skimming shuttles, they will provoke a more vigorous response. At this point an expedition will be launched against one or more of the alliance strongholds with the intent of capturing or destroying them. An expedition must be defeated either in space or on the ground; if the corporate forces manage to secure some of the alliance's installations they can hold the population hostage and may trigger a breakup of the alliance itself.

The ticket will more than likely be characterised by small craft skirmishes around the gas giant, but there is no reason why the mercenaries might not use other means. Sneaking aboard the installation to sabotage it or even steal some of its small craft complement is a viable, if risky, strategy. So long as the corporate installation packs up and leaves, and the locals are still able to service passing ships for a small profit, they will be entirely happy with the mercenaries' efforts.

STRIKE-STRIKE STRIKE, SMALL VESSEL.

MCr0.5. Success Only.

The remote world of Ghariki is dotted with small communities but has no central government. Various political entities have emerged at times but few make it past the alliance-of-villages stage. Most settlements have little economic value, existing just above the subsistence level. Here and there a community has access to a useful resource and can make a small profit trading with passing ships or selling to other settlements within ground travel range.

The town of Danser's Mine is one of the few economically viable sites on Ghariki, combining good agricultural land with easily accessible iron and copper deposits. As a result it has become a centre for manufacturing, insofar as such a thing exists on Ghariki and trades small quantities of surplus metal ingots to the occasional passing ship. Rumours are beginning to emerge that deposits of rare minerals have been found nearby and that the town's miners are building up a stockpile for sale to a favoured trader.

A client who does not wish to be identified is offering Cr500000 for a strike by a small starmerc vessel, to seize the town's reserves rare minerals before they can be sold elsewhere. The mercenaries are expected to overcome any resistance by whatever means are necessary and will need to control the town long enough to locate and load the minerals.

Referee's Summary

The town has a population of around 5,000. Most households have a gun or two but there is no military organisation as such. The mercenaries may be able to force a surrender without bloodshed if they are sufficiently well-armed and catch the locals by surprise. Posing as an innocent trade ship might be an option if the starmercs' vessel is a converted civilian type.

If surprise is not achieved, the locals will put up sufficient resistance that the mercenaries will have to use lethal force. A graphic display of power, such as blasting a building with ship's weapons, will cause a panic after which the locals are likely to hide or otherwise stay out of the way. The mercenaries may face objections and protests from people whose self-righteousness outweighs their fear, creating a difficult situation.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Capture and load several tons of rare minerals.
2. **CRITICAL:** Do not take significant casualties.
3. **ROUTINE:** Seize additional assets, such as iron and copper ingots, to fill up cargo space.
4. **ROUTINE:** Surprise the locals and avoid a fight.
5. **ROUTINE:** Do not use excessive force.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has two Critical and three Routine criteria, giving a maximum TSI score of 12. Most of the criteria are about professionalism and avoiding embarrassment rather than achieving the mission aims, since a competent starmerc outfit should be able to knock over a small outback town without difficulty. The unit's reputation may or may not be harmed by blasting near-defenceless yokels, but it certainly will be diminished by taking losses from such an inadequate opponent.

Administering Strike-Strike

With a little planning and subtlety, this is a very easy mission for a starmerc unit and even if it goes wrong a properly equipped force will be able to shoot their way out of trouble. Mercenaries with no morals might be laughing all the way to the bank but more decent Travellers might be troubled by what they had to do. The contract could be a learning experience in more than one way. Those who regret shooting defenceless locals might be motivated to plan better – assuming they realise bloodshed could have been avoided. A group might learn a valuable lesson if they later encounter contempt and derision from more professional units. What the Travellers have been thinking of as an easy payday might cost them a contract in future, as few clients will want to deal with mercenaries likely to cause a bloodbath. Mercenaries who keep the job as clean as possible may not see the benefits they reap but those who do not will more likely encounter consequences.

STANDING GUARD GUARDSHIP, CORVETTE.

MCr3.5. Possible Bonus.

Like many backwater systems, Vahneh sees little merchant traffic and even fewer navy patrols. The few settlements planetside are economically and politically insignificant, and until recently the system was not on the way to anywhere important. That is likely to change in the very near future, as a starport-building project has improved access to several systems. Vahneh is on one of the likely routes from the newly developed hub to the end-market systems. Ships passing through a poorly protected system will be easy prey for pirates.

The initial 'gold rush' when the new port opens is likely to be short-lived, making large investments in security – whether in the form of installations or new ships for the navy – unviable. The obvious solution is to hire mercenary vessels to protect the backwater systems for a few months. Thus the client is offering MCr3.5 for a corvette-sized vessel or an equivalent tonnage of smaller craft to act as a guardship in the Vahneh system for a period of three months. Other systems will also be protected in the same manner, each by a dedicated armed presence.

It is anticipated that the presence of an armed vessel should be sufficient to deter piracy but the guardship may have to fight. A bonus is payable if the starmercs can be shown to have saved a merchant vessel from attack, whether by combat or warning potential aggressors off. Emergencies of a non-combat nature among passing traffic are part of the starmercs' remit but events planetside are not.

Referee's Summary

Long tickets of this sort can be played as a mini-campaign rather than a single event, if the Referee so chooses. The mercenaries are likely to be quite bored a lot of the time as they sit in orbit waiting for something to happen. Aboard a small ship there are few opportunities for exercise or recreation, so the Travellers will have to deal with the effects of being cooped up for an extended period. One option is to make the occasional trip planetside, which might in turn lead to involvement in the affairs of a local settlement. The mercenaries could end up torn between helping out their new friends and fulfilling the terms of their contract.

A guardship deployment can be eventful without being violent. Passing merchant ships might get into trouble either in space or on a visit to one of the settlements. An interesting moral dilemma for the Travellers would occur if they have made friends with some of the local population who are then mistreated by the crew of one of the ships the Travellers are paid to protect. The legalities are straightforward – the mercenaries are deployed to protect commercial traffic passing through the system and nothing else – but there are ways merchant crews can be legally ‘protected’ right out of the system.

The ticket does not necessarily need to include combat with other vessels. The Travellers might encounter suspicious vessels nosing around and chase them off, or become involved in a game of brinkmanship with potential hostiles. A pirate attack is possible, in which case the Travellers will have to fight but a formulaic ‘incidents then boss fight’ approach to tickets is not desirable.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Do not allow any merchant ships to be destroyed or seriously harmed.
2. **IMPORTANT:** Carry out the deployment in an active and intelligent manner.
3. **ROUTINE:** Take measures to offset fatigue and boredom among the crew.
4. **ROUTINE:** Ensure a 95% or higher readiness rate with at least one vessel.
5. **ROUTINE:** Challenge all vessels passing through the system and investigate in a professional manner.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has one Critical, one Important and three Routine criteria, giving a maximum TSI score of 13. Success depends mainly on being ready – and being seen to be ready – to deal with whatever happens during the long deployment.

Administering Standing Guard

The Travellers are going to be deployed for a long period, which can result in efficiency falling over time. They must balance maintenance and rest for the crew with a high state of readiness in case an incident occurs. Travellers who simply sit in orbit waiting for bad guys to show up will find their vessel less effective than they had expected and may be caught out by an unexpected event. This does not have to be violent; a merchant ship passing through the system without being challenged by the guardship might report the apparent laxity, leaving the mercenaries with some explaining to do.

The mercenaries will be faced with uncertainty every time they detect a vessel emerging from jump. In all probability this will be a merchant vessel using the new route but it might not be. Some merchant captains will be lax about answering a challenge or even indignant they are expected to do so. Ships that do not comply with a request for identification will have to be investigated, which might mean closing to visual range or even a boarding. There are plenty of opportunities for interesting incidents without a fight occurring.

For an attack to take place, a merchant vessel and the attacker have to be present at the same time. The chances of both jumping in simultaneously are vanishingly small, so in all likelihood a pirate vessel will hang around waiting for a contact. Investigation by the mercenaries might lead to a fight if the pirates think they can win – they may hit upon the idea of eliminating the guardship and pretending to be it to gain surprise. Thus an encounter with pirates is likely to start with an attempt to discern the truth about a suspicious vessel. The Referee can make this more interesting with a few red herrings such as indignant independent captains who refuse to acknowledge the mercenaries’ right to investigate their ship.

FORCIBLE REPOSSESSION STRIKE, REINFORCED CORVETTE.

MCr3. Success Only.

Over the past decade the planetary government of Rythre has moved from a corrupt democracy to dictatorship in all but name. In and of itself this is of little interest to the interstellar shipping community but the increasingly authoritarian regime has implemented measures to make more money out of ships passing through its downport. This started with tariffs and increased fuel costs, and expanded into corrupt 'mandatory inspections', which resulted in ships being impounded or forced to pay inflated fees for non-existent remedial work.

The big shipping lines are immune to such petty measures, as they could bring tremendous legal and economic force to bear on any tin-pot government that tried to squeeze them. Smaller merchants and independent spacers have been thus far unable to do anything about the situation. However, after three small ships were seized in rapid succession the independents began pooling their resources. There is no prospect of a long-term approach as they have limited funds, so they have reluctantly decided to go for the throat.

The client, a consortium of small starship operators, is offering MCr3 for a vessel or group of craft in the 500–900 ton range, with a suitable ground combat contingent. The force will land at Rythre's downport and seize the three impounded ships, doing sufficient damage to the port to send a message to the owning government without putting it out of action. Collateral damage is to be avoided.

Referee's Summary

Actual repossession of the impounded ships will not be hard, as their original owners can provide all necessary codes and keys. It is also legal, more or less, since the original impoundment was on such spurious grounds. The difficulty will be in overcoming resistance and reaching the grounded vessels. If the Travellers blatantly launch an attack they will face an alert defence; deception or misdirection might prevent an effective response.

The port is protected by a pair of ship-grade missile launcher turrets, which can engage vessels to orbital distance with PAD missiles and launch standard ship-to-ship weapons at shorter ranges. The security contingent is better suited to bullying free trader crews than fighting starmercs but is equipped with TL8 small arms and some light support weapons. There are a handful of wheeled APCs mounting machineguns available if the defenders have time to deploy them.

A successful raid will be followed by a statement from the independent spacing community that tariffs and other unfair fees are to be returned or 'the next one is at your capital'. Whether or not this threat could be carried out is a matter for conjecture but the planetary government is seeking easy money, not a war, and will probably back down.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Recover the impounded ships.
2. **IMPORTANT:** Cause some damage to the port without disabling it.
3. **ROUTINE:** Deceive or confuse the defenders and achieve surprise.
4. **ROUTINE:** Complete the mission in a brisk and professional manner without getting bogged down.
5. **ROUTINE:** Defeat or neutralise opposition with sufficient efficiency that the government is intimidated.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has one Critical, one Important and three Routine criteria, giving a maximum TSI score of 13. Solid completion will probably require an element of surprise or deception, since there are enough defenders to bog down the mercenaries if they are all alerted.

Administering Forcible Repossession

This is a straight smash and grab mission with the potential to go badly awry. Good planning on the part of the Travellers will make the task much more straightforward and a wealth of information is readily available from those who have used the port in recent months. A force that takes advantage can set up a plan of attack to maximise their advantages and delay a response by the defenders, and with a little more thought they may even be able to deceive the defenders into taking some of their forces out of position.

The defenders are not fanatical. They will fight hard if they get the chance but if caught out of position or by surprise they are likely to break into small clumps of resistance that can be easily overcome by a more organised force. The mercenaries may have to make some difficult no-shoot decisions as there will be civilians and spacers caught up in the fighting and of course there is the question of how much damage will send the right message without rendering the port useless.

SEEK, LOCATE, DESTROY HUNTER, FRIGATE.

MCr9.

A number of small insurrections have been sputtering on in the region for several years. None were of any particular note until recently, when a sharp increase in the effectiveness of all involved parties occurred. The various rebellions have different motivations and ideologies, ranging from religion to economic issues, and it seems unlikely that the insurgent groups have suddenly decided to start cooperating on their own initiative. It seems plausible that some new agency has entered the fray and that its agenda is destabilisation by means of fostering existing conflicts. If this is the case, this new agency must possess a starship and significant assets. Eliminating this agent will cause the insurgent movements to collapse back to their pre-intervention levels.

The authorities are offering MCr9 for a vessel or vessels in the 1,000-ton range to seek out this agency and eliminate it. It is probable that there is a central figure or figures, perhaps disaffected political or military personnel, without whom the situation will return to normal. Capture of such figures will result in a bonus depending on their value but elimination is entirely acceptable.

The mercenaries will have to obtain information leading to the location or movements of their target, then set up an elimination by whatever means appear necessary. Evidence of involvement, such as arms or military hardware carried aboard a starship, will be of interest to the authorities and may lead to follow-on contracts against associates of the central figures.

Referee's Summary

There is indeed a new player on the local political stage. One of the minor regional powers wishes to weaken its opponents and create a pretext for military intervention in the affairs of neutral worlds. Care has been taken to make the situation look like the work of activists, or other stateless actors, but ultimately the funding and direction is coming from a politically motivated source. This means the opposition is better equipped than the mercenaries might expect.

The target has been sourcing weaponry and hardware on various worlds and using a couple of armed merchant ships to transport it. Covert deliveries of even a small amount of hardware have greatly enhanced the effusiveness of various insurgent groups, which have also been directed towards the sort of operations the target wishes them to undertake. The groups themselves have little in common with one another and may not even be aware their benefactor is working with others. Each of them has a different contact name and assumes their benefactor sympathises with their cause rather than pursuing another agenda. They will not knowingly betray their benefactor but could be induced or tricked to give up information.

The target has constructed a base of sorts on the homeworld of the most amenable insurgent group. It is well protected, with anti-starship weapons as well as ground defences, but the two armed merchants would not pose much threat to a frigate-sized warship.



Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Locate the target's base.
2. **IMPORTANT:** Capture or kill the target.
3. **IMPORTANT:** Disable or destroy both of the target's vessels.
4. **ROUTINE:** Discover the connection to the target's backers.
5. **ROUTINE:** Trace the origins of the military hardware being dispensed to insurgents.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has one Critical, two Important and two Routine criteria, giving a maximum TSI score of 14. The Travellers will need to do some intelligence work to find the target's base, after which they might choose to assault it or to ambush the merchants.

Administering Seek, Locate, Destroy

It is quite possible the Travellers will complete their mission without uncovering the target's political connections. Since the client does not know about this, they will be unaware that there is more to the situation than expected and will be pleased with the mercenaries. However, the situation is likely to be repeated later if the target's backers decide to try again.

One option the Travellers have is to gain the trust of some insurgent groups by helping them – although that could be a can of worms. Raiding their bases for intelligence would probably work better and might please the governments fighting against them. If the Travellers take this approach they will end up fighting a series of small actions against surprisingly well-equipped insurgents. A third option might be to build a model of which groups gained in firepower at what times, and to watch the underworld arms market for purchases of equipment likely to be responsible. Again, this requires good intelligence work. Unimaginative mercenaries may have to settle for staking out one of the insurgent groups and hoping to stumble on a visit from their benefactor. All of these roads lead to the same place – a violent confrontation with an enemy equipped to put up a good fight.

WAR AT ARM'S LENGTH WARFIGHTING, FLOTILLA.

Mcr25.

It is a constant of naval strategic planning that the need to prepare for a big war sucks up money that might otherwise be spent on security and commerce protection. In order to have enough capital ships and cruisers to defeat a major enemy, small escorts and patrol ships have to come a long way down the list of priorities. Normally the situation is kept in check by using the 'big war' assets to back up the patrol forces. This is an impressive level of overkill but does provide training opportunities.

Recent tensions with foreign powers have drawn all fleet assets to their depots and war deployment areas, leaving a shortfall that has been exploited by pirates and criminal gangs. It is thought the explosion in piracy includes commerce raiding by external powers or sponsorship of pirate groups willing to attack commercial shipping.

Rather than pull fleet assets back, which may be what the enemy wants, it has been decided to tackle the problem using starmercs. To this end MCr25 is offered for a two-month deployment of a flotilla-sized force. A single vessel of 2,000–3,000 tons displacement or a combination of smaller vessels, is tasked with hunting down pirate craft and eliminating their bases. This is considered a war-like situation, so the mercenaries will have discretion to act as necessary. They must remain mindful that the purpose of the mission is first and foremost to protect civilian traffic.

Referee's Summary

There are numerous pirates operating in the target area, currently enjoying what some call a 'happy time' in the absence of sufficient escorts and patrol ships. For a force as large as that on hire, the problem is not firepower but locating targets. At first it should not be difficult to find and destroy a few small pirate vessels; most are complacent and opportunistic rather than careful career raiders. However, as word gets around that a response has materialised the majority will go to ground or melt away, and pickings will quickly become slim.

As the mercenaries continue to search they will encounter rumours of ships destroyed rather than taken, suggesting a commerce raider is operating. This is indeed the case, with the increased level of piracy serving as a smokescreen to conceal the campaign. The raiders will not only hit ships; they will also attack

installations and even small starports. Where possible they will try to make the attack look like a pillaging attempt gone bad but astute starmercs will be able to discern a pattern.

The raider (or raiders) should be a rough match for the Travellers' ships and supported by lightly armed supply vessels masquerading as merchants. These vessels generally obtain supplies openly at nearby starports, hiding in plain sight. The Travellers might even 'save' one of them from what appears to be an attack. If these ships can be captured, the raiders' base of operations can be discerned from their records. Alternatively, a good estimate can be made by cross-referencing the appearances of the supply ships in various ports. Eventually, the mercenaries will be able to confront the raiders, although they may retreat if they realise the hunters are closing in.

Ticket Success Indicators

This ticket uses standard fivefold criteria. These are as follows:

1. **CRITICAL:** Drive off the foreign commerce raiders.
2. **IMPORTANT:** Locate the raiders' base of operations.
3. **ROUTINE:** Destroy or capture at least one pirate vessel.
4. **ROUTINE:** Be seen to be tackling the problem, reassuring the spacer community they have not been abandoned.
5. **ROUTINE:** Do not take serious damage to any vessel.

Values for Ticket Success Criteria are found on page 45 of *Mercenaries in the Far Future*. This ticket has one Critical, one Important and three Routine criteria, giving a maximum TSI score of 13. It is possible to complete the ticket without confronting the raiders or finding their

base. If the raiders decide things are too hot and retire, the situation will be stabilised and the mercenaries will have achieved their aim. They will not, however, have proven there was any foreign intervention. This may or may not be a good thing, given the level of tensions.

Administering War at Arm's Length

This is a straight anti-piracy ticket, with a 'war-like situation' in place and near-complete freedom of action. The mercenaries can proceed as they see fit but are expected to produce palpable results. The authorities would like dramatic newsvid sequences showing pirates getting blasted or mass arrests as a haven is raided but ultimately the measure of success is a reduction in the amount of attacks. That can be achieved almost immediately if the mercenaries are ostentatious about their presence in the region – even dumb pirates slip away when a flotilla of warships arrives.

Unveiling the raiders will probably require a lower-key strategy. The raiders are highly motivated to do as much damage as they can before retiring, so might keep making 'one last strike' before pulling back. Catching them is made more likely by deception and secrecy, perhaps leading the raiders to think the mercenaries are headed elsewhere. There is also the possibility the raiders might decide to take out the hunters before they get too close, setting up an ambush or attacking their base of operations. If the Travellers have not realised they are dealing with an organised commerce raiding operation as well as ordinary pirates they might be caught unprepared with disastrous results.



C H A P T E R - N I N E

BOARDING ACTIONS

In order for a boarding action to take place it is necessary to get from one ship to another. The only viable options – other than exotic techniques such as psionic teleportation – are to dock a vessel or small craft with the target or to make a free transit from one ship to the other. This is normally done by jumping with or without the use of a safety line and thrusters, although a variety of accessories are available to make the task easier and safer.

Sometimes a boarding action is something of a formality, with the dispirited remnant of a crew firing a few token shots before surrendering, or being so outmatched that their resistance is futile for all its gallantry. There are never any guarantees, however. Some crews will fight to the last in the hope of taking a few boarders with them, or out of fanatical loyalty to some cause or code – or perhaps because they expect to meet a worse fate if they surrender. There is always a chance the target crew might blow up their ship for one of the above reasons, or that it might suffer a catastrophic systems failure whilst a boarding party is present. Securing the key areas of a ship is not merely an operational goal, it is a matter of self-preservation.

Although most boarding actions take place after the target's ability to resist has been diminished, boarding is sometimes used as a ship-to-ship combat option. This is extremely risky, as a combat-capable vessel may be able to shoot down boarding shuttles or take out personnel as they attempt a jump across to the target, and once inside the boarders will face fierce and prepared resistance. The most viable tactic is to charge assault shuttles through the ship-to-ship firefight, perhaps pretending to be fighters or similar combat craft to deceive the enemy and make a surprise boarding. Personnel may also be able to get onto the enemy hull covertly and if not detected could – in theory at least – enter the ship and disable key components.

A boarding action consists of several distinct phases.

- **Approach:** In the approach phase, the boarders are usually carried in a ship or small craft, although there are other options. It may or may not be obvious during the approach phase that a boarding is intended.
- **Contact:** In the contact phase, the boarders move onto the hull of the target ship or position themselves outside chosen entry points. They might still be inside a craft or vessel during this phase or tethered to the target vessel ready to make entry.
- **Entry:** In the entry phase, the boarders attempt to get inside the target vessel. This might be as simple as proceeding through an unsecured airlock but in most cases it will be necessary to cut or blast a way in. Entry is the defenders' best chance to repel an assault force, so resistance is always expected. Different groups of boarders might be at the entry phase at different times. For example, a diversionary attack might be made at an airlock whilst another force is still attempting to get onto the target hull in order to enter at a different point.
- **Conflict:** Whilst defenders are capable of resistance, any boarders within the target vessel are considered to be in the conflict phase. Indeed, most starmercs consider 'conflict' goes on until they are absolutely sure the target is secured and resistance has ceased. It is possible for parts of a target vessel to be at the conflict phase whilst others have been secured and locked off.
- **Local Secure:** In some cases it may be possible to secure an area of a ship and prevent the enemy from gaining access. There is always a chance of holdouts or creative infiltration through maintenance ducts or rarely-used accessways, so 'local secure' status is often considered questionable.
- **Secure:** Only when resistance has been crushed and the vessel has been swept for holdouts will it be considered secure. Even then, there is a possibility of nasty booby-traps or other unpleasant surprises. A boarding party will normally deal with obvious and typical threats and leave the detailed inspection of a captured vessel to a follow-up team or dockyard personnel.

Key Areas

Certain parts of a vessel are critical to its operation and control of them can be considered an indicator of how the battle is going. More practically, control of key areas allows boarders to take actions that will further advance their position.

Control Spaces: Most civilian vessels have their command and control facilities concentrated on the bridge, usually with an emergency conning position in the engineering rooms. Control of the bridge denies its functions to the enemy even if the boarders cannot get access to the command systems. High-level functions such as fine control of internal life support systems and navigational plotting cannot be performed if the crew have lost control of the bridge but the ship can perform basic manoeuvres with DM-2 on all Pilot checks if it has a secondary conning position in the engineering spaces. Vessels with multiple bridges, including a flag bridge, can transfer control there and function as normal even if the main bridge is lost.

Engineering Spaces: If control of the power plant and drives has been lost a vessel cannot perform any manoeuvres or control machinery. If the boarders can gain access to the control systems they can cut power to any part of the ship at will but this would require bypassing the system security or forcing a captive to do so. It is also possible to trip the emergency cut-outs on part of the power distribution system, requiring a Difficult (10+) Engineer (power) check. This will kill the power to either a segment of the ship or a specific system such as the dorsal turret array. Resetting the system typically takes 2Dx10 minutes and requires an Average (8+) Engineer (power) check. The boarders could of course destroy any part of the drive or power plant, although this is not advisable if the ship is wanted intact.

Weapons Control: On small civilian ships, there is often no central fire control. Gunners may operate weapons from within a turret or a console on the bridge, depending on the design of the ship. If this is the case, each weapon must be controlled to prevent its use, although it is usually possible to cut off a section of the ship and deny access. If there is a central fire control area, whether it is on the bridge or in a separate part of the vessel, this must be controlled to prevent its use and typically gunners will still be able to manually operate weapons from their local control stations. It is not possible to cause weapons to self-destruct from a control station, although if munitions bays are accessible it may be possible to rig warheads to explode. Securing missile and torpedo stowage areas may be an important objective when fighting fanatical enemies, in order to prevent a final act of revenge.

Life Support: Life support is generally controlled from the bridge, with the primary machinery located in the engineering spaces – usually with a backup control station there. Controls are heavily secured to prevent tampering but physical measures can be taken to trigger a shutdown if the machinery itself is accessible. This requires a Difficult (10+) Mechanic check. Restarting life support after a triggered shutdown typically takes 2Dx15 minutes and requires an Average (8+) Engineer (life support) check.

Electronics and Computers: Most ships have distributed computer systems in order to make them resilient to damage but there will usually be one or more central programming chambers, which may also contain large segments of the ship's computer hardware or an entire computing core. On most ships, it is only possible to reprogramme or select certain options from a designated space. This may be the bridge for some functions but major changes to the computer system will not be accepted if they are not made from a permitted location. Boarders who gain access to the ship's computer rooms may not be able to do much but since a data purge must normally be triggered from there the boarding party may be able to preserve intelligence. Extremely sensitive data is often stored in an isolated computer system, which will have to be physically secured. Similarly, major electronics systems often have their own dedicated chambers. Notably, the primary flight electronics for a ship, universally known as avionics, are normally located in a chamber close to the bridge. Disabling these systems can impede a vessel, imposing DM-2 on all manoeuvres.



BOARDING AND COUNTER-BOARDING TACTICS

The purpose of a boarding action is normally to secure control of a vessel or capture something carried aboard it. Defeating defenders is a means to an end. If they can be kept out of the way by intimidation, deception or physical barriers, so much the better. Likewise, if the defenders can be induced to surrender or abandon ship the boarders' work is done for them. Units with a good reputation for professionalism are more likely to be able to negotiate a non-violent boarding than a band of trigger-happy yahoos known for blasting anything that moves and brutalising prisoners.

Most defenders will try to prevent entry to the ship if at all possible. Tumbling, erratic manoeuvring and deliberate evasion can keep boarders off the hull or prevent a docking, and it may be possible to engage incoming boarding craft with suitable weapons. If hostiles do make contact, the vessel's airlocks are the easiest means of access but also the most obvious. Defenders will generally concentrate their response around these locations and may set up booby-traps to be triggered by boarders as they enter the lock or exit into the interior of the ship. The defenders may find repelling an unimaginative assault a bit like shooting fish in a barrel.

To get around this problem, boarders will typically try to enter the ship at multiple points or at least make it look like they are doing so. Boarders might make a big show of getting ready to blast an airlock open whilst an infiltration party forces a maintenance hatch somewhere else in the ship – or perhaps the party on the hull with cutting gear is a diversion and the real assault will be against an airlock left undefended as the crew scramble to cover the diversionary access point. It is rarely possible to slip into a ship undetected but a good deception can have the defenders rushing around or drawn out of position, greatly diminishing the level of opposition.

If possible, boarders prefer to move fast and bypass points of resistance in order to secure key areas of the ship. The remaining defenders can be mopped up or induced to surrender once the ship's most important systems are captured. If this is not possible a standard tactic is to subdivide the target vessel by gaining control of key intersections and corridors, then concentrate forces to clear each segment in

turn. For their part the defenders will try to avoid this and may attempt to outflank and counterattack the boarders. Aboard large ships the action may become a confused series of running fights and assaults on impromptu strongpoints, with key locations changing hands multiple times before the matter is resolved.

Refereeing a Boarding Action

A boarding action is similar to any other battle but for the constraints imposed by the layout of the vessel. Whether boarding or resisting, the Travellers should make a plan based on what they know about the vessel being boarded. A deck plan is important, or at least a map of the part of the ship being fought over. The Travellers should consider possible access points, which include airlocks, hatches, cargo doors and other possible means of entry. Maintenance hatches and similar minor features are unlikely to be depicted on a deck plan, so should be positioned logically by the Referee.

Once forces are in place and the plan is made the Referee can proceed through the stages of the action – approach, contact, entry and conflict – until a result is obtained. Generally speaking the attackers have the option to retire to their own vessel if things are not going well, whilst the defenders have no such luxury. Thus a boarding action will typically go on until one side is defeated or the attackers give up. Morale can collapse among defenders and if internal communications have been cut it is possible that part of a force might be induced to surrender despite their side winning. Negotiations are usually possible and indeed the attacker might be persuaded to break off in return for several of their number who have been captured. Whether a deal is honoured is another matter, of course.

Most boarding actions are self-contained and take place within the craft or perhaps on its hull. However, a very large vessel might be the scene of a long-running combat with each side trying to gain control of a docking area to bring in reinforcements and shuttles running the gauntlet of enemy fighters to reach the tenuously-held landing deck. Such an action could go on for a long time but eventually the balance will tip one way or the other and, like all combats, the losing side will need to decide whether to seek escape or surrender.

APPROACH PHASE

The approach phase of most boarding actions will be a space combat, although there are circumstances where an approach might be made by personnel rather than craft, when a grounded or docked ship is stormed, or where personnel make a covert approach to a craft in space. If detected, the approaching boarders may be fired upon. Standard ship-to-ship weapons are unable to target something as small as a person in a vacc suit at close range but beyond one kilometre or so there is a possibility that major weapons could be used with some effect. Point defence arrays and smaller weapons are sometimes used to defend against a personnel boarding but this is an unusual situation, which may not be worth the investment in countermeasures.

If the boarding is to be made from spacecraft, any attempt to prevent it by firing on the incoming craft is resolved as a normal space combat. The attacking craft must close to Adjacent range (one kilometre or less) in order to launch a boarding attempt. Once at this distance the attacking craft can attempt a forced docking or, if the target is large enough, may attempt to land on the enemy hull. This is resolved in the Contact phase.

Alternatively, personnel may attempt a risky distant approach in vacc suits, usually with the assistance of specialist equipment. If detected, personnel are extremely vulnerable but make a small target. Bay and spinal weapons cannot fire on personnel unless they stray into the weapon's narrow firing arc. Turrets and barbettes can but suffer DM-4 to attack rolls at Short range and DM-8 at Close range as their mountings are not designed for this kind of operation. Turrets and barbettes cannot fire on a personnel target closer than one kilometre (Adjacent range) as they cannot slew quickly and precisely enough.

A distant approach can be attempted by simply jumping in the direction of the expected intercept point but this is extremely hazardous. More commonly, boarders will use low-power thrusters to control their approach whilst maintaining a low sensor profile. Devices are also available to reduce the emissions of the boarders' suits for a time.

GUIDANCE POD

A guidance pod is a cylindrical device with a basic seeker head and directional gas-jet thruster. It has virtually no thermal emissions and normally uses passive sensors to track the target. Attachment points for up to six vacc-suited personnel allow a boarding team to make a transit of 10,000 kilometre or more, using power and air from the pod's internal reserves. A high-speed transit is possible by 'tossing' the pod from a space vessel that then turns away, hopefully concealing the fact that it has dispatched a boarding team. There is a limit to how fast the pod can be sent if it is to decelerate in time but the transit will be made in a quick and stealthy manner. Alternatively, a guidance pod can be used to make a slow transit from a 'standing start' – at rest relative to the target. In either case it can get a team onto the target hull from a great distance, providing the target vessel does not change its vector to any great degree. Transits of this sort require well-trained personnel as they will spend a long time in their suits and must arrive in combat-ready condition. Guidance pods use low-observable materials as standard and are no more likely to be detected than a person in a vacc suit.

Item	TL	Kg	Cost
Guidance Pod	10	22	Cr14,000



TRANSIT PACK

A transit pack is designed to be worn over a vacc suit's normal components. It consists of a flexible outer layer of radar-absorbent material referred to as a 'transit sack', a thermal containment unit similar to chill cans used groundside and a small manoeuvring unit. The pack makes boarders resemble a shapeless blob with a very low radar return and virtually no thermal emissions. Combined with strict communications discipline the pack imposes DM-2 on attempts to detect or track the user. Upon arriving at the target the pack is jettisoned, destroying the transit sack. The remainder of the components can be retrieved and reused. Refurbishment costs Cr5000.



Item	TL	Kg	Cost
Transit Pack	11	8	Cr25,000

There are two spacecraft-scale weapons that are well suited to anti-boarding operations; sandcasters using specialist ammunition and point defence systems. Ground-scale weapons fitted to a spacecraft can engage personnel normally.

Anti-Personnel Sandcaster Canister

A standard sandcaster can be used against incoming personnel with the right ammunition. An anti-personnel canister launches multiple fragmentation charges, which detonate a pre-set distance from the hull creating a hail of small fragments. This offsets the inability of starship turrets to slew quickly enough by using a brute force area effect equivalent to a Normal area fire attack doing 3D damage (ground-scale) on a hit. An anti-personnel canister is the same size as other sandcaster munition and are available at TL8. Twenty canisters consume a ton and cost Cr40000. Anti-personnel canisters can be used against targets in space or on a planetary surface.

Point Defence System

A point defence system can be used against personnel in space or on the ground, although it is an inefficient way of targeting personnel and cannot be directed against missiles or torpedoes whilst operating in anti-boarder mode. A point defence system can engage a number of targets equal to its Intercept score – determined each round the system is in use – and check to attack each separately. Normal difficulty is Average (8+) but this is subject to DMs under Detecting and Targeting Personnel (see following page). The system inflicts damage on the spacecraft scale equal to its Intercept score. Thus a Type II point defence system with an Intercept score of 2D delivers 2D damage on the starship scale, multiplied by 10 against personnel. Few potential boarders are likely to survive a hit from this sort of weapon, making a distant-jump boarding one of the most hazardous forms of combat.

Detecting and Targeting Personnel

Sensor systems aboard spacecraft are not designed for tracking personnel at short ranges and struggle to identify individual targets sufficiently well to permit a firing solution. This applies whether the vessel is being approached by personnel on the ground or jumping from a spacecraft 10 kilometres away. The normal difficulty to detect and identify an object is Average (8+) but this is subject to DMs based upon the size and level of emissions of the target. A vehicle-sized object imposes DM-2 on Electronics (sensors) checks to detect or track it, whilst personnel impose DM-6. Specialist sensor equipment exists, which can overcome this difficulty, but there are also countermeasures available.

Security Sensor: The majority of starship sensor systems are geared towards detecting and tracking large objects at great distances and not well suited to dealing with personnel targets. A security sensor system remedies this gap by installing an entirely separate set of detectors and a control station for them. The system costs Cr1000 per ton of the ship and consumes two tons. It provides DM+4 on attempts to detect or track personnel within 1,000 kilometres in space or within 100 metres on the ground, including anyone on the hull.

THE CONTACT PHASE

Once an approach has been made, personnel need to get onto the opposing ship's hull and position themselves to begin boarding. Most vessels are not fitted with equipment to track the movements of personnel on the hull but all airlocks and maintenance hatches have a proximity sensor, which alert the crew if there is someone or something within five metres of the entry point. Most of the time these sensors serve to warn maintenance crews of obstructions near a hatch they intend to use, however it can be useful in determining the planned entry point of boarders. All hatches and airlocks are tied in to the ship's monitoring system, so any attempt to open one or cut through it will be relayed to the crew. A security sensor will provide more detailed information on numbers and allows boarders who are not next to an entry point to be tracked.

Docking and Direct Transit

A direct transit can be made from one craft to another by way of an airlock or breaching tube. Both require moving into contact with the target vessel, which can be problematic. If the target cooperates, perhaps under threat of annihilation, then docking will be no more difficult than normal and even personnel jumping from one ship to the other will face no additional difficulties.

However, an uncooperative target is an entirely different matter. It is entirely impossible to dock with a craft that is rapidly tumbling and indeed putting a vessel into a three-axis 'deadman's tumble' is a standard boarding-resistance tactic. A craft that can manoeuvre, even under very low power, is difficult to dock with.

Docking is a mutual-consent manoeuvre. That is, unless both parties have activated the docking process it will be incomplete. Both airlocks have a set of clamps to hold the ship together and on standard designs they interact to form a tight bond. If only one set of clamps is engaged the grip is less than half as solid, which can lead to damage if one ship tries to pull away. Two standard airlocks, with mutual clamping in place, provide DM+4 on checks to maintain lock integrity. If only one set of clamps is in place, there is no DM. A forced linkage apparatus (see page 43 of *High Guard*) provides DM+6 whether or not the target has consented.

Docking with an airlock normally requires an Average (8+) Pilot check. If the target is actively or inadvertently uncooperative, the docking can still be attempted unless the craft is tumbling. A negative DM equal to -3 per point of Thrust the target is using applies, with DM+1 for every point of Thrust the approaching vessel uses to match the attempted movement. If forced linkage apparatus is in use, its Pilot check DM is also applied. Linking airlocks does not cause either vessel to have control over the other's lock unless a docking has been authorised by both craft. It will be necessary to force the airlock or cut through it in order to enter a resisting ship.

If, once the craft are docked together, one of them applies Thrust – or both do, in a mismatched manner, the linkage may tear. Avoiding this requires a straight Average (8+) check, with DMs for mutual airlock clamping or forced linkage apparatus. DM-1 applies for each total point of Thrust in use. It is very easy to tear away from a single-clamped airlock docking and very difficult to pull free from a forced linkage. A skilled pilot trying to match Thrust to defeat a pull-away attempt may make an Average (8+) Pilot check. The Effect is applied to the check to avoid breaking the link.

If the check to avoid a torn link is failed, the airlocks are no longer connected and each one with engaged clamps will be damaged. Each vessel takes D3 points of damage for every point of negative Effect and the contents of the airlock are exposed to vacuum. If the inner doors of either lock are open or compromised, the interior of the ship will be also exposed to vacuum.

Entering or Cancelling a Tumble

A pilot may deliberately place their craft in a tumble to prevent boarding. This takes D3 rounds, during which the craft may not manoeuvre in any other way. Once the tumble is initiated, the pilot may make random evasive manoeuvres without counteracting the tumble but deliberate manoeuvres are subject to a negative DM determined by the severity of the tumble.

To initiate an effective tumble, the pilot must make a Routine (6+) Pilot check. If the check is failed, the vessel may have some inconvenient rotation but docking or free boarding can still be attempted at DM-1. The severity of an induced tumble is rated by the negative DM applied to attempts to Free Board with the tumbling ship. This DM is equal to D3 for an accidental tumble caused by control loss and D3 plus the Effect of the Pilot check made to initiate a deliberate tumble. This DM is applied to any attempts to attach lines, or for personnel to get onto the hull, and docking is impossible.

Correcting a tumble can be tricky. Most starship control systems, have an automatic tumble cancellation system, which will reduce the severity of the tumble by 1 every round but a good pilot can do it more quickly. An Average (8+) Pilot check is required, with a DM equal to the severity of the tumble. If the check is made, the tumble is cancelled. If it is failed, the Effect of this check is the new severity of the tumble.

Breaching Tubes

It is possible to gain direct access to another ship without using an airlock by the deployment of a breaching tube. This consists of a robust but flexible 'pipe' culminating in a ring of cutters and clamps (see page 43 of *High Guard*) which attaches to the outer skin of a vessel. A breaching tube can be combined with a forced linkage apparatus to provide a very strong link but if not it will be torn free. This will expose the interior of the target ship to vacuum. It is more common to breach from a small craft clamped to the hull of the target vessel than from one major vessel to another, partly for the security of the attacking ship and partly to prevent damage if the target manoeuvres.

A breaching tube provides a seal from a hatch or airlock on the attacking ship to the breach made in the target. Once the attacking ship detaches, the target is left with a large hole in the hull. Most breaching tubes have a

seal at each end and usually at least one somewhere along the length of the tube, which can be used to close off the tube or target ship and prevent unnecessary casualties. Some attackers will not care about such things, of course, but if a vessel is to be taken as a prize or used to transport prisoners it will need to be made safe. The tube seal will not hold forever but will give whoever is in control of the ship at the end of the boarding action a chance to close off the breach.

Free Boarding

Free boarding is far more dangerous than a direct transit from one craft to another. It requires personnel to move across the gap between two vessels and attach themselves to the target. Free boarding is the only method possible if a target is tumbling. A negative DM equal to the severity of the tumble is applied to any attempts to board.

Free boarding is normally performed by personnel in vacc suits, usually with some sort of thrust system and/or safety lines, since only the most desperate would jump onto a tumbling hull without some means to recover if they bounce off. Various pieces of assistance equipment are used but ultimately the process depends on striking the target vessel's hull in a way that permits the boarders to stay attached. Projections can be grabbed, and magnetic grips will help if the impact is not too violent, but typically a boarding will require several attempts to get all personnel secured.

To land on a hull using a typical vacc suit requires an Average (8+) Vacc Suit check. This assumes the operator is trying to use the suit's magnetic boots and/or grabbing at projections to remain attached. The check is subject to a negative DM indicated by the severity of a tumble, or DM-1 for every point of Thrust if the target vessel is manoeuvring under power. If the check is failed the Traveller bounces off and is no longer in contact. This can be fatal if there is no safety mechanism in place but a Traveller using a safety line can recover to the launch point and try again. This takes a number of rounds equal to the negative Effect of the failed Vacc Suit check. It is common for vacc troopers to operate as pairs, with one remaining at the launch point as a safety anchor and the other making the jump. Once one of them secures a position on the target hull the other can be pulled across without requiring a skill check.

A Traveller with a thrust vest or similar manoeuvring aid can make a renewed attempt to land on the target hull every round but the thrust device does not provide any DM to secure a grip on the target hull. There are devices that can assist in this endeavour.

ANCHOR PAD

An anchor pad is a one-use device consisting of a line attached to a container of instant-setting adhesive. When flung against a hard surface the container ruptures, creating an anchor point. Obtaining a clean strike is not difficult, although mistakes made amid a massed boarding action can result in troopers being stuck together or becoming attached to moving objects. The anchor pad grants DM+4 to attempts to make a free boarding. More than one can be carried but a Traveller who bounces off the target hull might drift too far away to use a second anchor.



Item	TL	Kg	Cost
Anchor Pad	9	2	Cr500

LINE ROCKET

A line rocket is a larger version of the anchor pad. Rather than being hurled by hand it is launched from a container and guided by an operator. Container and rocket are linked by 500 metres of fine wire, to which the operator and multiple additional personnel can be attached with quick-release clips. For greatest safety the container is attached to the hull or a point inside the airlock of the attacking vessel but if targeting a tumbling vessel this is impractical. Achieving an attachment requires a Routine (6+) Electronics (remote ops) check on the part of the operator.

Attaching a line to a tumbling ship is always dangerous, as a Traveller can end up whirling around on the end of a cable. A line attached at both ends will be torn free at one or – occasionally – both and may lash personnel nearby as it parts. Likewise, multiple personnel clipped to a line anchored on a craft that starts to tumble can be smashed together. For this reason it is standard practice to clip on at the launching end and jump singly, with intervals of 5–10 seconds between personnel on the line. Thus an anchored line rocket typically allows the safe delivery of one trooper onto the hull every combat round and can be crowded at increasing risk.



Item	TL	Kg	Cost
Line Rocket	10	5	Cr1500

THE ENTRY PHASE

Once the craft to be boarded has been reached it is necessary to gain entry. There are three means of doing so, designated primary and secondary access points and manufactured access points. Primary access points are normally airlocks, although cargo doors and the like may also qualify. Essentially, these are the points of access normally used in day-to-day operations. They are the easiest to defend and the least likely to result in depressurisation of the target ship.

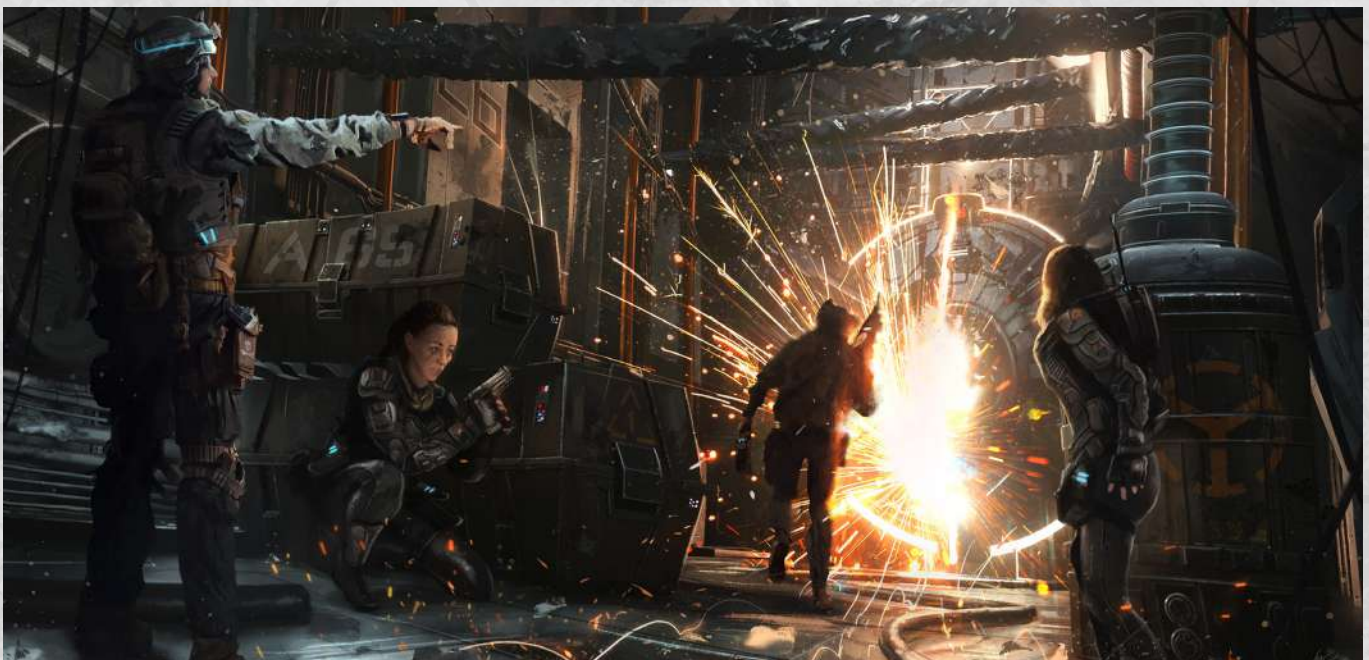
Secondary access points include maintenance hatches and external equipment bays with a connection to the interior of the vessel. These may have been overlooked in a defensive plan or even forgotten about entirely by a sloppy crew. Some secondary access points can act as a sort of airlock, since they have an interior hatch and a hull hatch but some lead directly into pressurised spaces and cannot be opened without venting the interior of the ship.

Manufactured access points are essentially holes cut in the hull or breaches caused by weapons fire. A primary or secondary access point is not considered a manufactured access point even if it is blasted open, as it retains the characteristics of those access points – notably the expectation of their use and the presence of equipment nearby to deal with a loss of pressure seals. Most access points have emergency seals large enough to block a completely detached hatch or airlock door and are usually located in areas that can be closed off. A hole made at a random point may open a large segment of the vessel to space.

An airlock or hatch requires authorisation from within the vessel before it will respond to a command to open. During normal operations a vessel in space should have its locks set to 'require authorisation', although sloppy crews might not bother to change the settings. Thus unless the boarders get lucky or have somehow unsecured the hatches and airlocks they will have to force them. Some secondary access points such as maintenance hatches can only be opened from inside no matter what permissions are in place.

Forcing a hatch or airlock causes less damage than cutting a hole through it but does require specialist tools if the job is to be done quickly. Almost all ships have sensors on their access points that will detect an attempt to force the door or hatch and alert the crew. Most doors and hatches can be worked on by a maximum of two Travellers; large hatches can accommodate four and cargo doors will usually have room for six or more. The Travellers attempting to force a hatch or door may total their STR bonuses in making the attempt, assuming they can all obtain suitable leverage and have appropriate tools. At the very least, prybars and the like will be required.

Forcing an airlock or hatch requires a Formidable (14+) check using the total available STR bonus as a DM. Each attempt takes 2D combat rounds, averaging about 40–45 seconds. If successful, the entry point is no longer secure but will take an additional 1D rounds to fully open, during which time defenders might shoot through the gap. If specialist tools are available the task becomes a lot easier.



GAPPER

A gapper is designed to rapidly break the seal and locking devices on a hatch or airlock door. It consists of a container of high-pressure gel forced into the seals of the entry point. When triggered, the gel undergoes rapid and violent expansion, not quite of a level to be called an explosion. This counts as STR DM+6 when trying to force an entry point. Any personnel foolish enough to be trying their luck with a prybar when the gapper goes off will suffer 2D damage and be blasted free of the target craft. It takes one round to deploy a gapper. Expansion takes place the next round, after which the door must be forced open manually as normal. One container of gapper allows one attempt.



Item	TL	Kg	Cost
Gapper	11	1	Cr600

HATCHBOT

A hatchbot is not really a robot, in that it has very limited logic capabilities and is designed for one purpose only. Taking the place of one Traveller, it grants STR DM+4 when trying to force an airlock or hatch. Its purpose-built manipulator arms are ideal for gripping and pushing two doors apart or opening a hatch. Any attempt to force an airlock using hatchbots only takes half as long as usual. A hatchbot has manoeuvring jets and will normally be programmed to follow a Traveller until directed to get an entry point open. Its armoured casing grants Protection +6 and 12 points of damage are required to disable it. For this reason, starmercs may choose to have the hatchbot dispense a container of gapper, accepting the possibility of damage to the robot in return for a rapid breach.



Item	TL	Kg	Cost
Hatchbot	10	8	Cr4500

Breaches and Manufactured Entry Points

If it is not possible to breach a hatch or airlock, or attackers do not want to be predictable, a manufactured entry point can be used. This is a euphemism for making a hole in the ship. The crudest way to do this is to blast the hull with shipboard weapons until breaches appear and this often happens before a boarding anyway. A 'practicable breach' – in other words, a hole big enough for a person to enter through, penetrating to a point where access is possible to the interior – may be caused by a hit that delivers sufficient damage although this is not guaranteed. To cause a breach on a weapons hit, a straight Very Difficult (12+) check is made, with the modifiers listed on the Hull Breach table.

Hull Breach

Factor	DM
Hull Armour	-1 per point
Damage Delivered	+1 per 10 full points
Vessel under 100 tons	+2
Vessel 100–999 tons	—
Vessel 1,000–9,999 tons	-4
Vessel 10,000–99,000 tons	-8
Vessel 100,000 tons or more	-12

On Effect 0 the breach is not large enough to enter but will compromise the pressurisation of the holed compartments. On Effect 1+ a practicable breach is made.

A breach made by weapons fire or similar crude methods such as conventional explosives will be jagged and hazardous to enter. An Average (8+) Vacc Suit check is necessary to avoid injury. If failed, the Traveller takes 1D damage for every negative point of Effect. A breach that is cut rather than blasted is much safer, requiring only a Routine (6+) check to enter without encountering a hazard, and damage is D3 per point of negative Effect on a failed check.

Cutter Types

Type	TL	Cut Rate	Notes
Emergency Cutter	10	1	The most basic light hull-cutting device. Most starships have one in their toolkit for emergency operations.
Rescue Cutter	9	3	A standard hull-cutting device, typically carried by rescue ships and military vessels for emergency use.
Heavy-Duty Cutter	11	5	A powerful plasma cutter typically mounted on a powered platform or sometimes carried as a backpack.
Assault Cutter	12	8	A group of cutting devices designed to work together for a rapid breach.
Advanced Cutter	+2	+2	Two Tech Levels after the basic model becomes available, an advanced variant with greater power will appear. Cost is 25% greater, in return for increased power.

Cutting a breach can take some time in the case of armoured starships, so cutting through a secured airlock or hatch is sometimes preferable. Cutters are categorised by their type, which in turn determines how long they will take to get through armour and hull.

The resilience of the prospective entry point determines how many rounds it will take to get through it. A cutting device removes its Cut Rate in Resilience each round. This can be increased by a skilled user. A successful Mechanic check increases the cut rate of a hand-held device by +1 for every point of Effect on an Average (8+) check. For remotely operated devices such as a breaching tube headed by an assault cutter, Cut Rate is increased by +2 for every point of Effect on an Average (8+) Electronics (remote ops) check.

Resilience of Starship Components

Component	Resilience (Holed)	Resilience (practicable breach)
Hatch, Unarmoured Ship	4	15
Airlock Door, Unarmoured Ship	6	25
Hatch, Armoured Ship	6+ 1 per point of Armour	25 + 1 point of Armour
Airlock Door, Armoured Ship	10 +1 per point of Armour	35 + 1 per point of Armour
Hull, Unarmoured Ship	50	250
Hull, Armoured Ship	100 + 10 per point of Armour	400 + 20 per point of Armour

EMERGENCY HULLCUTTER

Most starships carry at least one hull-cutting device for emergency use. Civilian ships might use a cheap TL8 mechanical cutting device, which will just about suffice for a light merchant ship's hull or internal partitions. The standard emergency hullcutter is a hand-held device resembling a short and very bulky rifle. It uses a highly focused laser array to burn through the target materials and could not be used as a weapon except by pushing it against the victim and triggering the lasers. Damage would be 4D if the cutter were used in this manner but DM-4 applies to any attempt to attack someone with such a clumsy object. Cut rate is very poor but sufficient to get through airlock doors and the like.



Item	TL	Kg	Cost
Emergency Hullcutter	10	4	Cr2500

RESCUE HULLCUTTER

A rescue hullcutter is the first energy cutting device to become available. Its laser array is larger and more powerful than the much smaller emergency cutter that appears a Tech Level later. The unit requires a large power source, which is usually worn as a backpack by one operator whilst a partner wields the bulky cutting

unit. It is extremely unlikely the device could be used as a weapon against any target capable of movement; DM-6 applies to attack rolls and damage will be 6D if somehow successful. A rescue cutter is capable of removing chunks of wreckage or burning through a hatch but is not well suited to assault work.



Item	TL	Kg	Cost
Rescue Hullcutter	9	12	Cr11000

HEAVY-DUTY HULLCUTTER

Using a small plasma generation unit, the heavy-duty hullcutter is a standard piece of equipment for ship's troops and some rescue vessels. It requires a large power unit but the hand-held cutting device is a little more bulky than an assault rifle. A plasma cutter can be used as a weapon, out to about five metres, if deliberately defocussed, and would cause 8D damage to anyone attacked in melee. DM-4 applies to attack rolls. Some heavy-duty cutters are carried as a handheld/backpack unit by designated personnel but they are more commonly deployed as a 'cutbot'. Cutbots are capable of minimal autonomous operations, along the lines of finding a weak spot and cutting a hole, and are almost always directed by personnel. These may be in the immediate vicinity in which case no skill is needed or an operator using Electronics (remote ops) can control the cutbot from another vessel. A cutbot has manoeuvring jets and can be used as an improvised transport device by personnel clinging to its projections. The main advantage of this configuration is that it allows a breach to be made without exposing personnel to harm from debris or enemy fire.



Item	TL	Kg	Cost
Heavy-Duty Hullcutter	11	8	Cr25000
Heavy-Duty Hullcutter Cutbot	11	14	Cr60,000

ASSAULT CUTTER

An assault cutter is not a single device but an array of cutters, each less powerful than a heavy-duty hullcutter, usually mounted on a ring. Each cutter can move a short distance along the circumference of the ring, allowing the rapid creation of a practicable breach.

An assault cutter array of this sort is used in the standard breaching tube (see page 43 of *High Guard*). A standalone cutting ring, complete with anchoring frame, powerpacks and cutting ring, is available and takes 1D rounds to emplace.



Item	TL	Kg	Cost
Assault Cutter	12	24	Cr85000

ARMoured LOCK SHUTTER

Security-conscious starship operators may retrofit armoured airlock shutters, which are also fitted as standard aboard some small craft. A lock shutter covers one airlock or similar opening such as cargo doors. It has no attachment points for another craft's airlock and can passively prevent docking simply by being present. A lock shutter has Resilience 25 against cutting attempts. For MCr0.5, an 'active shutter' is available, which is packed with explosives. At a pre-set point anywhere from 1% to 99% of its Resilience, the shutter will be fragmented by the explosive charge, delivering 4D damage to anyone trying to cut their way in.



Item	TL	Ton	Cost
Armoured Lock Shutter	10	1	MCr0.25

THE CONFLICT PHASE

The conflict phase of a boarding action can be resolved using the normal combat rules. Other than on very small ships a boarding action will typically involve separate groups heading for key locations or securing the line of advance and retreat. Movements can be tracked on a deck plan and contacts between belligerents can be resolved as normal.

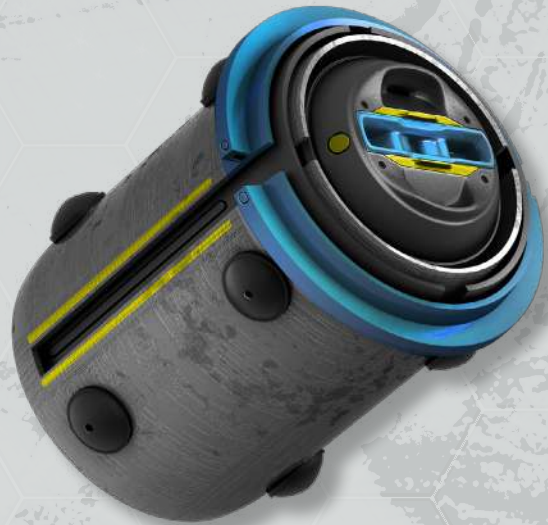
In many cases the combat will take place in pressurised areas with the ship's artificial gravity still functioning, in which case no additional rules are required. If an area is depressurised, damage to suits or deliberate disablement of life support functions might become relevant. See page 69 for details.

The internal layout of spacecraft provides a great many hard surfaces, which can be used in a variety of ways. It is common for defenders to take cover around corners and digging them out can be difficult. One technique favoured by experienced starmercs is to bounce a grenade off a nearby wall and around the corner, either endangering the defenders or forcing them to move out from their position of cover to get around a corner from the threat. The problem with this is that grenades will tend to bounce or roll down the corridor. For this reason a specialist 'one bounce' boarding grenade is favoured. Another useful weapon for microgravity combat is known as a 'tumbler', primarily used to scatter or disorient personnel not well enough anchored.



BOARDING GRENADE

A boarding grenade can carry almost any warhead type, although small fragmentation payloads are most common. The grenade is a little more bulky than standard as it is surrounded by a frangible casing. When pelted at a hard surface the grenade will bounce off but the casing disintegrates as it does so, leaving a sticky coating on the exposed payload. The grenade will stick to the next hard surface it strikes. This feature is normally used to bounce a grenade around a corner into a group of hostiles but it is also possible to slam the grenade against a surface before throwing it, causing it to stick to the next object it encounters. A person stuck with a grenade takes an additional 3D damage when it detonates. Either mode of operation requires a Difficult (10+) Athletics (dexterity) check.



Weapon	TL	Range	Damage	Kg	Spaces	Cost	Magazine	Magazine Cost	Traits
Boarding Grenade	9	Thrown	3D	1	Cr250	—	—	Blast 4	Smart, One-Use

TUMBLER GRENADE

A tumbler grenade produces a great deal of gas when it detonates. In an atmosphere this acts like a low-powered concussion grenade but the grenade's real purpose is to disturb the orientation of enemy personnel in microgravity. The expanding wave of gas will push personnel around, requiring a Routine (6+) Vacc Suit or DEX check to remain anchored or oriented. It will also scatter debris and disperse anti-laser aerosols and has some applications in a rescue situation. Someone stranded in the middle of a large chamber can be sent floating towards a suitable anchor point by a well-placed tumbler grenade, although this process is uncontrolled and rather random. Tumblers are configured the same way as a boarding grenade to allow them to be efficiently placed.



Weapon	TL	Range	Damage	Kg	Spaces	Cost	Magazine	Magazine Cost	Traits
Tumbler Grenade	10	Thrown	1D	1.2	Cr350	—	—	Blast 10, Stun	Smart, One-Use

THE SECURE PHASE

The conflict phase continues until one side or the other has secured the target vessel. This usually means eliminating the remaining opposition but there are many ways this can be achieved. Most crews will surrender or retreat, rather than fighting to the last, and it is common to quickly interrogate any captives to determine if there are likely to be any holdouts. Often a surrendered crew will be required to present their personnel roster to their captors and to account for everyone. This is particularly important in a boarding action since one or two active personnel can wreak havoc among boarders who think they have won. Alternatively, sections of the ship can be sealed off and depressurised to get rid of anyone lacking a suit. Whilst not a perfect solution this imposes a time limit on any suited holdouts – they will have to act and therefore reveal themselves before their air supply gives out.

Securing a target vessel requires a search for enemy personnel and booby traps as well as an inspection of the vessel as a whole. This is important, as combat damage

might cause the ship to become unviable sometime after capture. Severe damage that could cause a vessel to break up will almost certainly be noticed and reported by internal monitors if they are functional but what appears to be minor damage can escalate quickly under the right conditions. Boarders tend to be reluctant to remove their vacc suits until a ship has proven itself to be capable of sustaining them indefinitely.

Once the ship is secure it becomes possible to start work on breaking encryption and bypassing lockouts to get control of it. This is a lengthy process and there may simply not be time to carry it out. In this case the boarders may have to grab what they can and depart, possibly booby-trapping the wreck or destroying it. One simple gambit used to deny a captured vessel to the enemy is to hole the fuel tanks and set the ship adrift. Even if the boarders cannot gain access to control systems the power plant will shut down in a short time, leaving the hulk to drift off into space. It might be found by a determined search but a cold and inert ship that has been drifting on an unknown vector will be difficult to locate.



MERCENARY VESSELS AND MODULES

Almost any starship can be used for transportation, especially with the addition of transport modules. However, some designs are aimed specifically at the mercenary marketplace. In certain regions such vessels may require proper licensing, although it is sometimes possible to get around such stipulations by declaring the vessel a transport asset or logistics ship.

Generally speaking, mercenary vessels tend to be subject to suspicion when they enter an area, which is allayed by either good paperwork indicating a reputable operator or a solid word-of-mouth reputation based upon observed behaviour. Paramilitary vessels and civilian ships carrying heavy weaponry or contingents of ground troops are even more suspicious if noticed and may be subject to a detailed scrutiny by the local navy.

Boarding a ship filled with heavily armed personnel in order to carry out an inspection is a daunting prospect for naval crews, for which reason it is commonplace to direct newly arrived starmerc vessels to a holding area until sufficient force can be assembled to ensure the safety of the boarders. The alternative, typically employed by weak security forces, is to take paperwork at face value and hope for the best. A mercenary unit that criss-crosses the line between legal work and piracy might be able to bareface its way through backwaters by a combination of threat and fiction, however it will ultimately be investigated if it strays into well-secured territory.

TRANSPORT MODULES

One of the problems faced by mercenary formations is finding a starship with the right accommodation and cargo space for troops and equipment. Some solutions to this problem are inefficient, such as chartering an entire vessel for the duration of the campaign or billeting mercenaries in standard starship cabins at passenger rates. Those units that can afford it find that investing in a self-contained

transportation unit can pay for itself over the course of a unit's career. These units are somewhere between cargo pods and starship modules, and contain everything a unit needs during its journey.

There are two general types of module. One is designed to be loaded aboard a ship as cargo and requires only a hold large enough to accommodate it. The other is more specialised, since it is intended to become part of the ship as a breakaway module. These have their advantages but they are more expensive than simple in-hold transportation modules. If the unit has sufficient capacity to move its personnel and equipment in modules it does not need to pay for passage aboard a ship – the whole module is shipped as a cargo item at standard freight rates and the unit might even be able to negotiate a bulk discount.

When carried in a cargo hold, transportation modules require tonnage equal to their own displacement plus 5%. They are in some ways similar to docked small craft but do not require launching or recovery facilities.

Mercenaries as Freight

Transport modules are not cheap, but they allow a mercenary unit to essentially ship itself as freight rather than negotiating passage aboard a starship. The difference in cost between personnel travelling basic passage and aboard a self-contained module carried as freight is not great, but few ships have barracks accommodation and will try to charge standard passage rates or somewhere close to them for troops travelling in staterooms. Thus to some extent the benefit of a transport module lies in the ability to quickly find a ship going the right way rather than huge savings on transportation. Any ship with enough hold space can ship a module, with everything stowed where the mercenaries want it rather than where a freighter captain decided it should go.

SHIP'S TROOPS BARRACKS MODULE, SECTION

This small module can be used to transport a force of mercenaries but is more commonly installed on a semi-permanent basis into a civilian ship being used by starmerces. The module is unpowered, relying on the parent vessel for power and life support. This requires a certain level of trust between the occupants and crew of the ship, which is rarely a problem when the module is being used to carry ship's troops. The module draws 7 Power from the parent vessel.

The module is designed to provide living and working space for a section-sized force, which typically means 8–10 personnel. There is a single cabin for the section leader, which also has to serve as an office and workstation. The remaining personnel are accommodated in a barracks unit, with a small common area between. An armoury

sufficient to accommodate the weaponry of 10 troops plus vacc suits and other personal equipment is located adjacent to the leader's cabin. Living in such a small space is claustrophobic after a while, so it is common to leave an area of the cargo hold clear around the module for the troops to 'spill out' into. At some point the creeping takeover of a cargo bay has to be curtailed, which can lead to arguments about how much space is needed by the troops and for ship operations.

The module consumes 33.6 tons of cargo space, enabling it to be carried by almost any small transport ship. At standard freight rates a section of troops can be moved one parsec for Cr33600.A typical free trader could carry two, using the remainder of the cargo bay as extra working and living space, or transporting a couple of vehicles.



12

HULL POINTS

SHIP'S TROOPS BARRACKS MODULE, SECTION

TL10		TONNAGE	COST (MCr)
Hull	32 tons, Light	—	1.2
Systems	Armouries x2	2	0.25
Staterooms	Standard x1	4	0.5
	Barracks (capacity 10)	20	1
Common Areas		6	0.6
TOTAL: MCr 3.55			

CREW

NONE

RUNNING COSTS

MAINTENANCE COST

Cr296/month

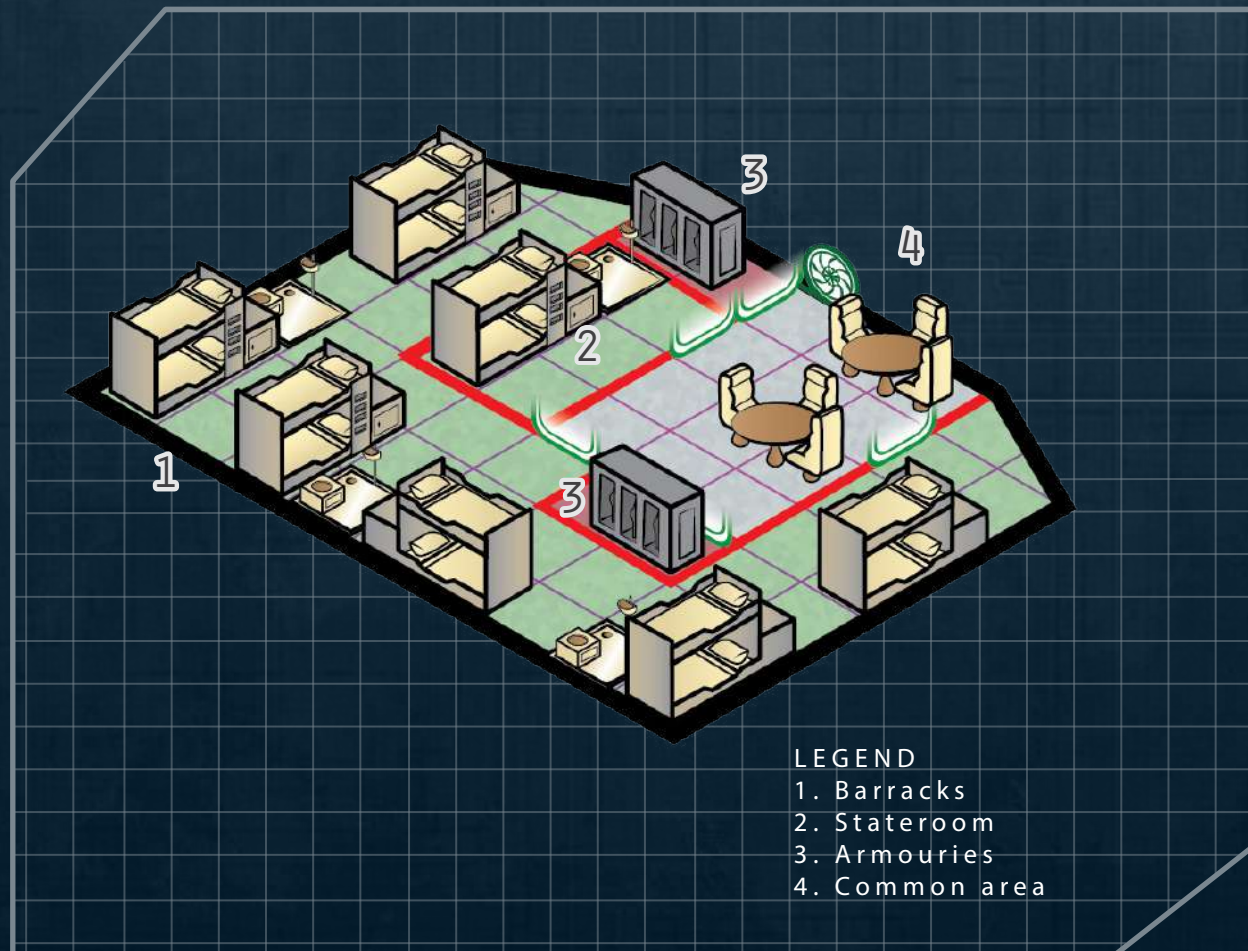
PURCHASE COST

MCr3.55

POWER REQUIREMENTS

7

BASIC SHIP
SYSTEMS



SHIP'S TROOPS READY MODULE

This 'ready module' is not intended for transportation, but instead allows a ship's troops contingent to be slotted into almost any cargo bay. It is much larger than the barracks module in order to allow space for personnel to maintain a high standard of readiness over a long period in space.

The module is laid out as a simple rectangle, with a 10-soldier barracks farthest from the entry point. Flanking the entrance are two standard cabins, a briefing room and a medical bay and an armoury space. The 12-ton common area fits between the two. Its open-plan construction is space-efficient but does mean that meals are eaten in a space that also contains exercise equipment and workbenches covered in partially-stripped weapons. There is

sufficient room to maintain an alert-status ship's troops contingent without spilling out into the rest of the vessel but it is a small world to live in for any length of time.

It is not uncommon for one of the cabins and the briefing room to be repurposed, or for the medical bay to end up serving the needs of the ship's crew as well as their marines. The module takes up 55.65 tons of cargo space and is self-powered, enabling it to act as a refuge if the ship is holed. For this reason, modules of this sort are sometimes installed in exploration or salvage ships, or aboard liners in hazardous areas. That way the marines can be kept away from the passengers – who may not even suspect their existence – unless needed.



SHIP'S TROOPS READY MODULE

TL10		TONNAGE	COST (MCr)
Hull	53 tons, Light	53	1.9875
Power Plant	Fusion (TL8), Power 20	2	1
Fuel Tanks	20 weeks of operation	1	—
Systems	Armouries x2	2	0.5
	Briefing Room	4	0.25
	Medical Bay	4	2
Staterooms	Standard x2	8	1
	Barracks (capacity 10)	20	1
Common Areas		12	1.2
TOTAL: MCr 8.9375			

CREW

NONE

RUNNING COSTS

MAINTENANCE COST

Cr745/month

PURCHASE COST

MCr8.9375

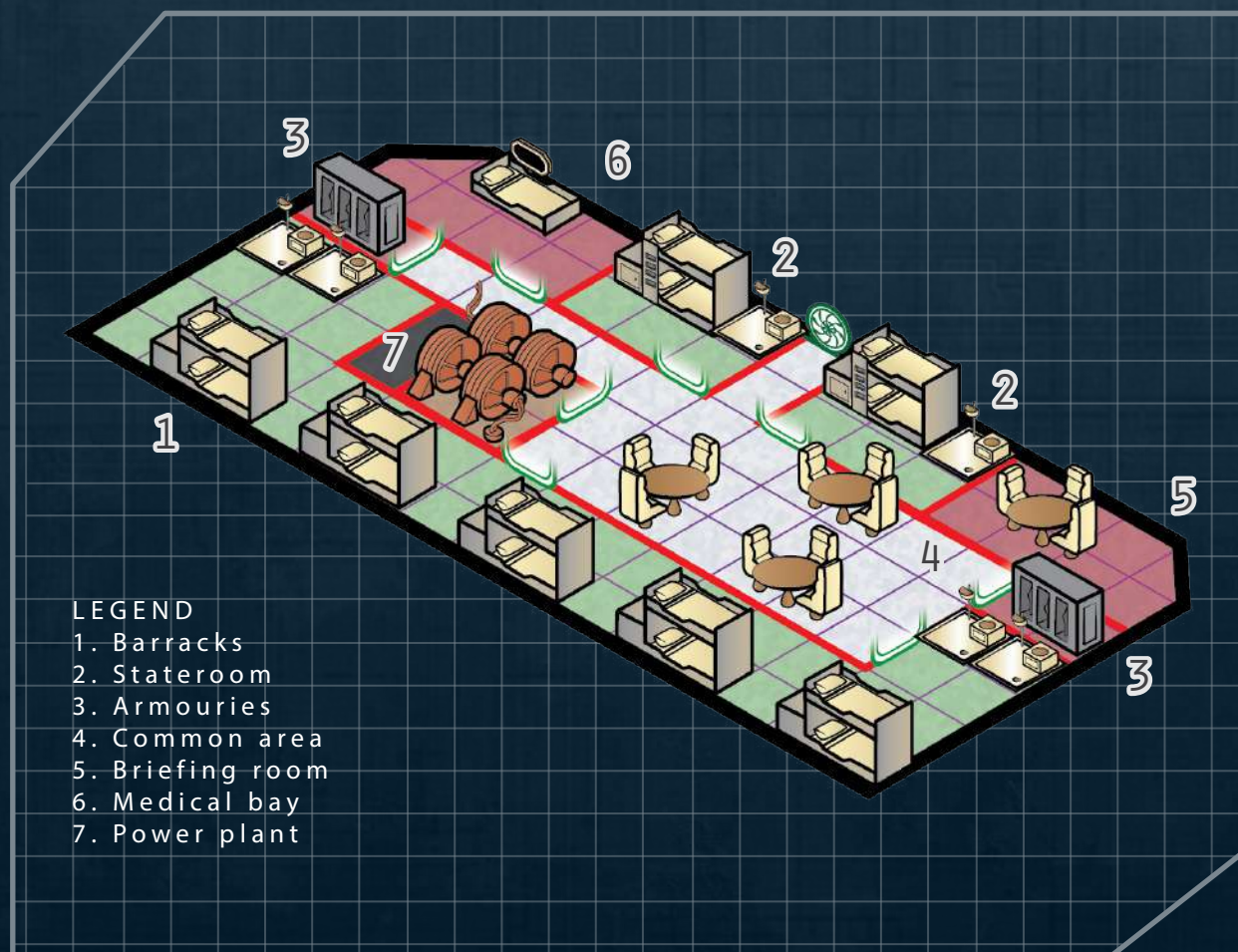
POWER REQUIREMENTS

11

BASIC SHIP
SYSTEMS

1

SYSTEMS



PLATOON COLD TRANSPORT MODULE

Designed to provide low-cost transportation for mercenary forces, the cold transport module is sometimes modified to carry colonists or relief workers. Repeated hopping in and out of low berths is considered by some to be a long-term health risk but provided a decent medical team is on hand the short-term risk is small. The module takes up 63 tons of cargo space and will fit into the hold of a standard far trader – albeit with little room to spare. It is self-powered.

Configuration is standard, with a small living area at the entrance end. This has three staterooms and a barracks area capable of supporting four other personnel. Standard staffing levels are two or three medics and a technician to look after the reactor,

although providing it is well maintained the power plant can be left to its own devices for a week or two without hazard. Usually the unit command team travels ‘awake’ as well as the medics.

Up to 40 personnel and their personal equipment are accommodated at the far end of the module, with a medical bay between. The common area, such as it is, can be used as a recovery space for groggy soldiers while they get their bearings. Ideally, a unit that expects to go into action soon after arrival will be shipped in a vessel capable of loaning the unit cargo space so personnel can work out the kinks and make themselves combat-ready before exiting the transport ship.



36

HULL POINTS

PLATOON COLD TRANSPORT MODULE

CREW

NONE

RUNNING COSTS

MAINTENANCE COST

Cr963/month

PURCHASE COST

MCr11.55

POWER REQUIREMENTS

12

BASIC SHIP
SYSTEMS

4

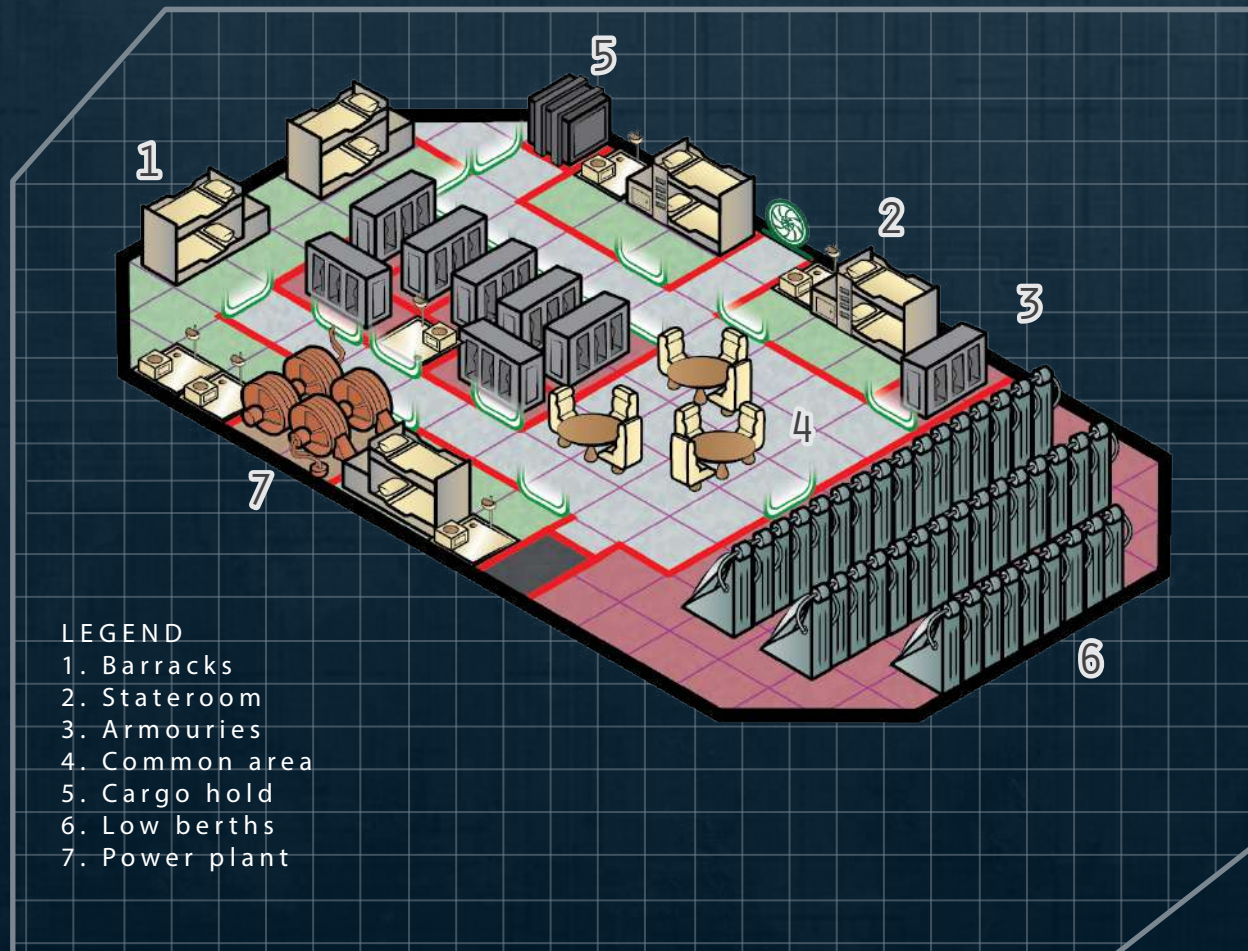
SYSTEMS

TL10

TONNAGE COST (MCr)

Hull	60 tons, Light	—	2.25
Power Plant	Fusion (TL8) Power 20	2	1
Fuel Tanks	12 weeks of operation	0.6	—
Systems	Armouries x8	8	2
Staterooms	Standard x3	12	1.5
	Barracks (capacity 4)	8	2
	Low Berths x 40	20	2
Common Areas		8	0.8
Cargo		1.4	—

TOTAL: MCr 11.55



LEGEND

1. Barracks
2. Stateroom
3. Armouries
4. Common area
5. Cargo hold
6. Low berths
7. Power plant

PLATOON TRANSPORT MODULE, *IN-HOLD*

One of the smaller transportation modules available on the open market, this version is used by some large forces to carry troops in a sort of 'module village' within the hold of a freighter. It is entirely suitable for use by a platoon-sized infantry unit, or could be used to transport personnel who crew vehicles or weapon systems shipped in the same hold. The module is not self-powered, relying on an external source which could be a spacecraft or a field reactor.

As a transportation unit, this module does not have a great deal in the way of facilities. It is designed purely to get troops from one place to another and to deliver them and their equipment in working order. The module draws 23 Power from the parent ship and takes up 117.76 tons of cargo space.



40

HULL POINTS

PLATOON TRANSPORT MODULE, *IN-HOLD*

TL10		TONNAGE	COST (MCr)
Hull	112 tons, Light	—	4.2
Systems	Armouries x8	8	2
Staterooms	Standard x5	20	2.5
	Barracks (capacity 34)	68	3.4
Common Areas		16	1.6
TOTAL: MCr 13.7			

CREW

NONE

RUNNING COSTS

MAINTENANCE COST

Cr1142/month

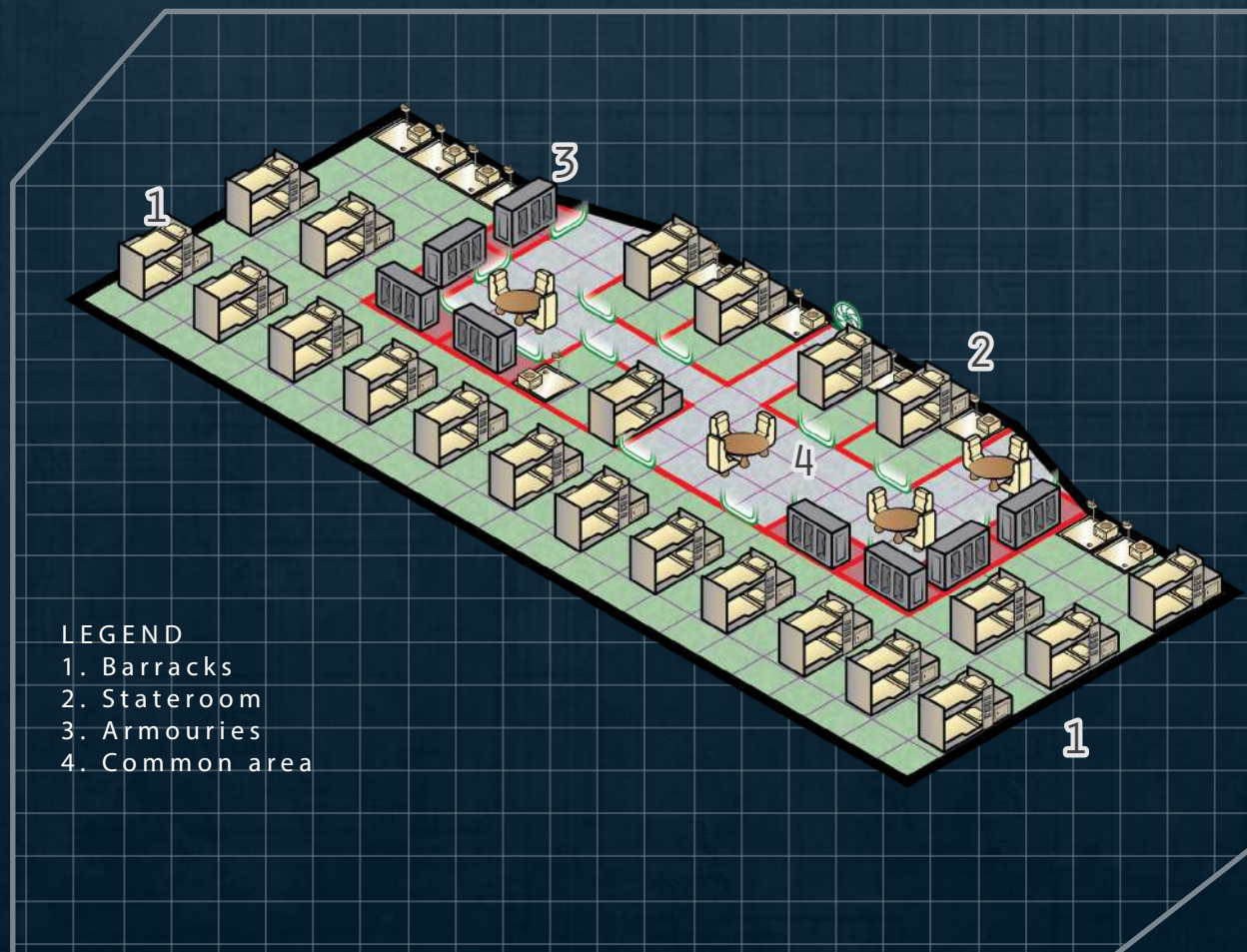
PURCHASE COST

MCr13.7

POWER REQUIREMENTS

23

BASIC SHIP
SYSTEMS



LEGEND

- 1. Barracks
- 2. Stateroom
- 3. Armouries
- 4. Common area

PLATOON ASSAULT MODULE

The assault module is designed to carry a platoon-sized infantry unit and act as a forward base once deployed. It can be carried internally but would more commonly be mounted on a docking clamp. 10% of the module's tonnage is devoted to its quick-deployment system. This lowers the module from its docking clamp to the planetary surface whilst a set of directional charges blast away obstructions (and possibly hostile personnel, in extreme circumstances) to allow the module to settle on a more or less flat surface.

Although commonly referred to as an assault module, the unit is often used as a quick-deployment forward base. In modified form it has seen service with disaster-response organisations, either as a base or ready-made medical centre. It is not intended to be deployed in the face of the enemy despite its hull being proof against most ground forces weapons, as exiting the module under fire would prove a problem.

The module takes up 160 tons in a cargo hold or can be carried on an external docking point. A standard subsidised merchant, a vessel used as transport by many mercenary units and as a naval auxiliary by some governments, can deliver this module along with a few vehicles or additional supplies. The module is self-powered and self-contained, and can survive in the field for as long as most occupants can stand to be inside it.

The entrance section serves as a marshalling bay when not in use as a common area, with weapons stowed in a workshop/armoury close to the entry point. The medical bay is also quickly accessed from the entry point. The compact barracks is in the centre of the module, with an operations centre created by the briefing room and a cluster of cabins used by officers or senior NCOs.



64

HULL POINTS

PLATOON ASSAULT MODULE

TL10		TONNAGE	COST (MCR)
Hull	160 tons, Standard	—	8
Power Plant	Fusion (TL8) Power 40	4	2
Fuel Tanks	20 weeks of operation	2	—
Systems	Armouries x8	8	2
	Briefing Room	4	0.5
	Medical Bay	4	2
	Workshop	6	0.9
	Deployment System	16	1.6
Staterooms	Standard x6	24	3
	Barracks (capacity 34)	68	3.4
Common Areas		24	1.6
TOTAL: MCR 25			

CREW

NONE

RUNNING COSTS

MAINTENANCE COST
Cr2083/month

PURCHASE COST
MCR25

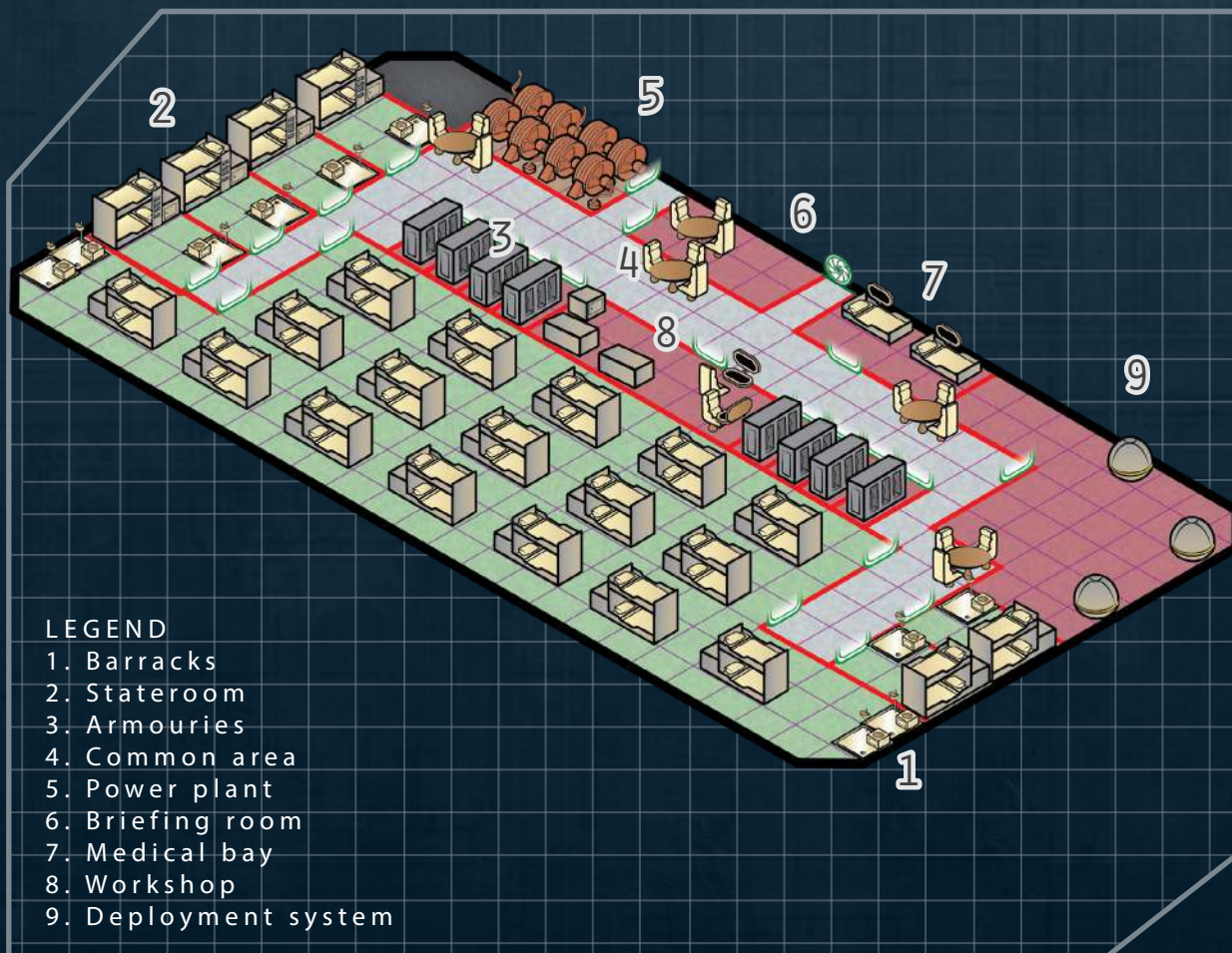
POWER REQUIREMENTS

32

BASIC SHIP
SYSTEMS

1

SYSTEMS



LEGEND

1. Barracks
2. Stateroom
3. Armouries
4. Common area
5. Power plant
6. Briefing room
7. Medical bay
8. Workshop
9. Deployment system

COMPANY TRANSPORT MODULE, *IN-HOLD*

Company transport modules are more the province of governments than small mercenary units, although specialist shipping companies – which may or may not be starmerces – might invest in them in order to provide a service for a large fee. The standard model can support a company of up to 172 personnel or slightly more if some cabins are double-occupied.

The module takes up 577.5 tons of cargo space, requiring a freighter or similar large vessel to transport it but it is self-contained. There is

sufficient capacity for some pieces of heavy equipment, although this area may be repurposed as additional living or training space. As a pure transport asset the module does not provide command and control facilities. On the other hand there is provision for maintenance of weapons and equipment, enabling some users to create a battle dress or combat armour support facility out of the module if deployed groundside.



COMPANY TRANSPORT MODULE, *IN-HOLD*

TL10		TONNAGE	COST (MCr)
Hull	550 tons, Light	—	20.625
Power Plant	Fusion (TL8) Power 110	11	5.5
Fuel Tanks	12 weeks of operation	3.3	—
Systems	Armouries x40	40	10
	Workshops x 2	12	1.8
Staterooms	Standard x12	48	6
	Barracks (capacity 160)	320	16
Common Areas		80	8
Cargo		35.7	—
TOTAL: MCr 67.925			

CREW

NONE

RUNNING COSTS

MAINTENANCE COST
Cr5660/month

PURCHASE COST
MCr67.925

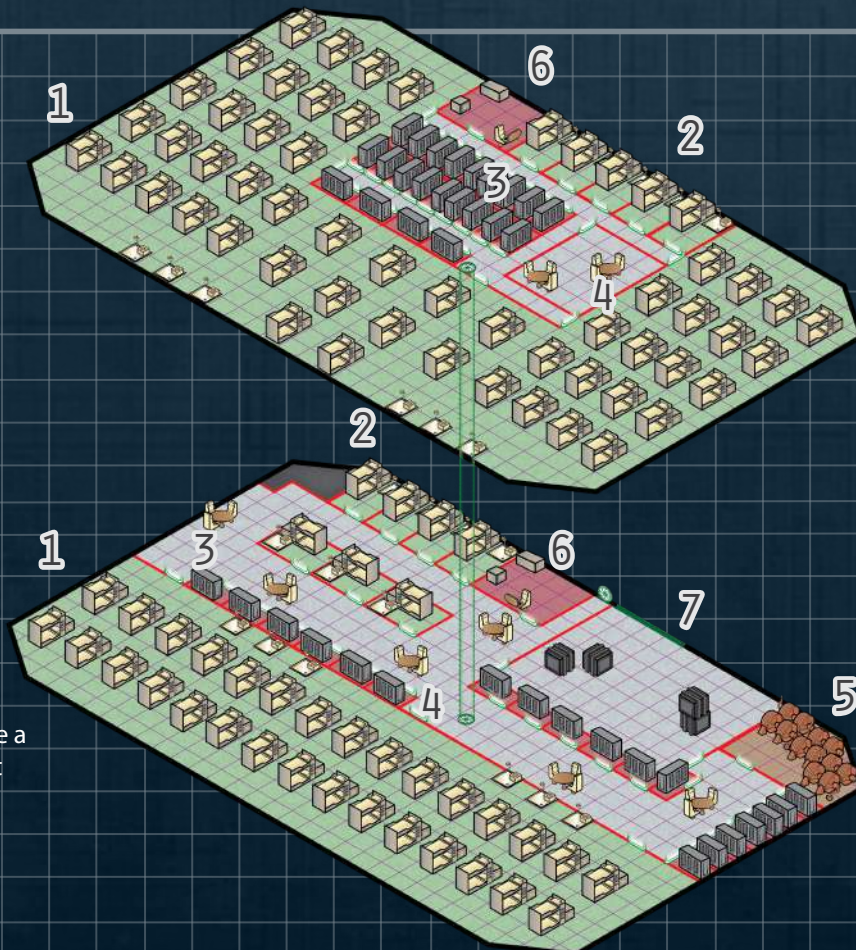
POWER REQUIREMENTS

110

BASIC SHIP
SYSTEMS

LEGEND

1. Barracks
2. Stateroom
3. Armouries
4. Common area
5. Power plant
6. Workshop
7. Cargo hold



PECAH BREACHER SHUTTLE

The *Pecah*-class is one of several small vessels designed for the sole purpose of getting troops into an enemy ship. Its blocky hull is heavily armoured and, combined with high acceleration, this enables the Pecah to dash through enemy fire to the target. Between the pilot's cockpit and the automated power plant is a cabin area capable of holding up to 10 vacc-suited personnel for a short time. Personnel are provided with a frame to which they can strap themselves but absolutely no amenities beyond this.

The floor of the troop compartment houses a breaching tube/forced linkage apparatus. The Pecah is designed to belly-land on a target vessel then deploy its grapples to hold it in place whilst cutters make a practicable breach. Troops then drop through the floor hatch into the target vessel and begin causing mayhem. The vessel is armed with a fixed pulse laser as standard but some users remove it as unnecessary. Others fire a few shots on the way in, hoping the boarding attempt will be mistaken for a fighter pass. The weapon might actually cause some damage to a civilian craft but most operators consider this a marginal benefit.



8

HULL POINTS

PECAH BREACHER SHUTTLE

CREW

PILOT

RUNNING COSTS

MAINTENANCE COST
Cr1160/month

PURCHASE COST
MCr13.915

POWER REQUIREMENTS

4

BASIC SHIP
SYSTEMS

1

SYSTEMS

14

MANOEUVRE
DRIVE

4

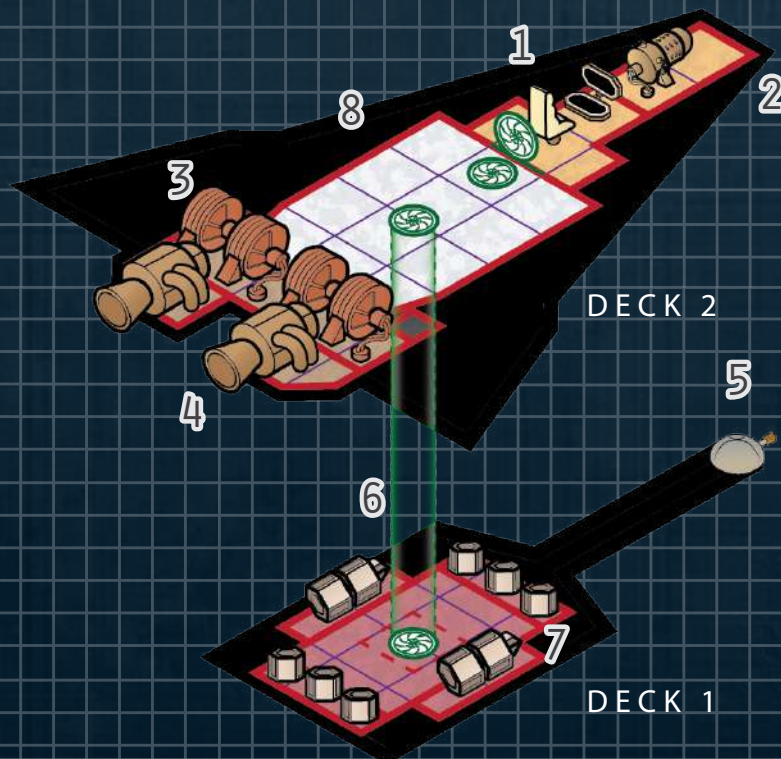
WEAPONS

TL12

TONNAGE COST (MCr)

Hull	20 tons, Standard	—	1
Armour	Crystaliron, Armour: 12	3	0.6
M-Drive	Thrust 7	1.4	2.8
Power Plant	Fusion (TL12), Power 30	2	2
Fuel Tanks	4 weeks of operation	0.2	—
Bridge	Single Cockpit	1.5	0.01
Computer	Computer/10	—	0.16
Sensors	Civilian Grade	1	3
Weapons	Fixed Firmpoint (pulse laser)	—	1.1
Systems	Breaching Tube	3	3
	Forced Linkage	2	0.1
	Apparatus (TL12)		
Cabin Space		5.9	0.145
Software	Manoeuvre/O Library	—	—
Cargo		—	—

TOTAL: MCr 13.915



LEGEND

1. Bridge
2. Sensors
3. Power plant
4. M-drive
5. Fixed Firmpoint
6. Breaching tube
7. Forced linkage
8. Cargo hold

PELTAST MERCENARY ESCORT

The Peltast was created with the mercenary marketplace as its primary point of aim, although corporate and small-navy operators were also considered. It is built on a wedge-shaped hull form, not unlike an enlarged Type-S scout/courier. The primary, upper, deck runs the length of the ship with crew accommodation and medical bay unusually located forward. The central area of the main deck is given over to common spaces with access to the bridge. This is located aft of centre on the vessel's spine, creating a small third deck. The gunnery control chamber and a small annex for the nuclear damper make up the rest of this mini-deck.

The aft part of the main deck is given over to engineering and drive spaces, with fuel stored in the 'wing' created by the wedge shape. The lower deck is shorter, containing armouries, workshop and an extendable linkage apparatus that can push out past the nose of the ship. Parts of the drive systems and power plant are also located on this deck but cannot be accessed from it other than by way of rarely-used maintenance hatches.

The Peltast is designed to operate as an escort or light patrol vessel and usually armed with three triple laser turrets. Two flank the bridge, with the third atop the nose of the ship. When serving as a security vessel the Peltast is handicapped by the lack of a small craft to make dockings. The ship

is a little vulnerable when docking with a suspect vessel but with a triple laser turret almost touching the other hull and two others available to deal with incoming threats the situation is as secure as it can feasibly be made.

Nominal crew consists of a pilot and astrogator, two engineers and an operator for each turret and the screen. If one of the bridge crew takes the role of captain, the Peltast can operate comfortably for an extended period. Up to four additional personnel can be carried or 16 more if the crew move to double-occupancy in all staterooms. This allows ground combat personnel or other specialists to be carried if necessary.

Peltasts are sometimes encountered acting as rescue ships, where their low berths – and occasionally the brig – can be useful. In this role they may or may not be armed. More commonly the Peltast is seen in orbit over a backwater starport that has reported troubles or escorting a gaggle of small merchants along a hazardous main. One of the most successful uses of this ship is the 'complete port security package', which arrives with a team of groundside security people in the extra cabins or low berths. For a stiff fee the mercenaries will provide both groundside defence and orbital traffic control and will bash rowdy drunks over the head for free.



120

HULL POINTS

PELTAST MERCENARY ESCORT

TL12		TONNAGE	COST (MCr)
Hull	300 tons, Standard	—	15
Armour	Crystaliron, Armour: 6	22.5	4.5
M-Drive	Thrust 5	15	30
Jump Drive	Jump 2	20	30
Power Plant	Fusion (TL12), Power 345	23	23
Fuel Tanks	J-2, 8 weeks of operation	64.6	—
Bridge	Holographic Controls	20	1.875
Computer	Computer/20	—	5
Sensors	Military Grade	2	4.1
Weapons	Triple Turrets (pulse lasers) x3	3	12
Screens	Nuclear Damper	10	10
Systems	Repair Drones	3	0.6
	Breaching Tube	3	3
	Forced Linkage Apparatus	2	0.1
	Briefing Room	4	0.5
	Medical Bay	4	2
	Armouries x4	4	1
	Brig (capacity 6)	4	0.25
	Workshop	6	0.9
	UNREP System (20 tons/hour)	1	0.5
Staterooms	Standard x12	48	6
	Low Berths x16	8	0.8
Common Areas		32	3.2
Software	Manoeuvre/0	—	—
	Jump Control/2	—	0.2
	Library	—	—
Cargo Space		0.9	—
TOTAL: MCr 154.525			

CREW

CAPTAIN, PILOT, ASTROGATOR,
ENGINEERS X2, GUNNERS X4

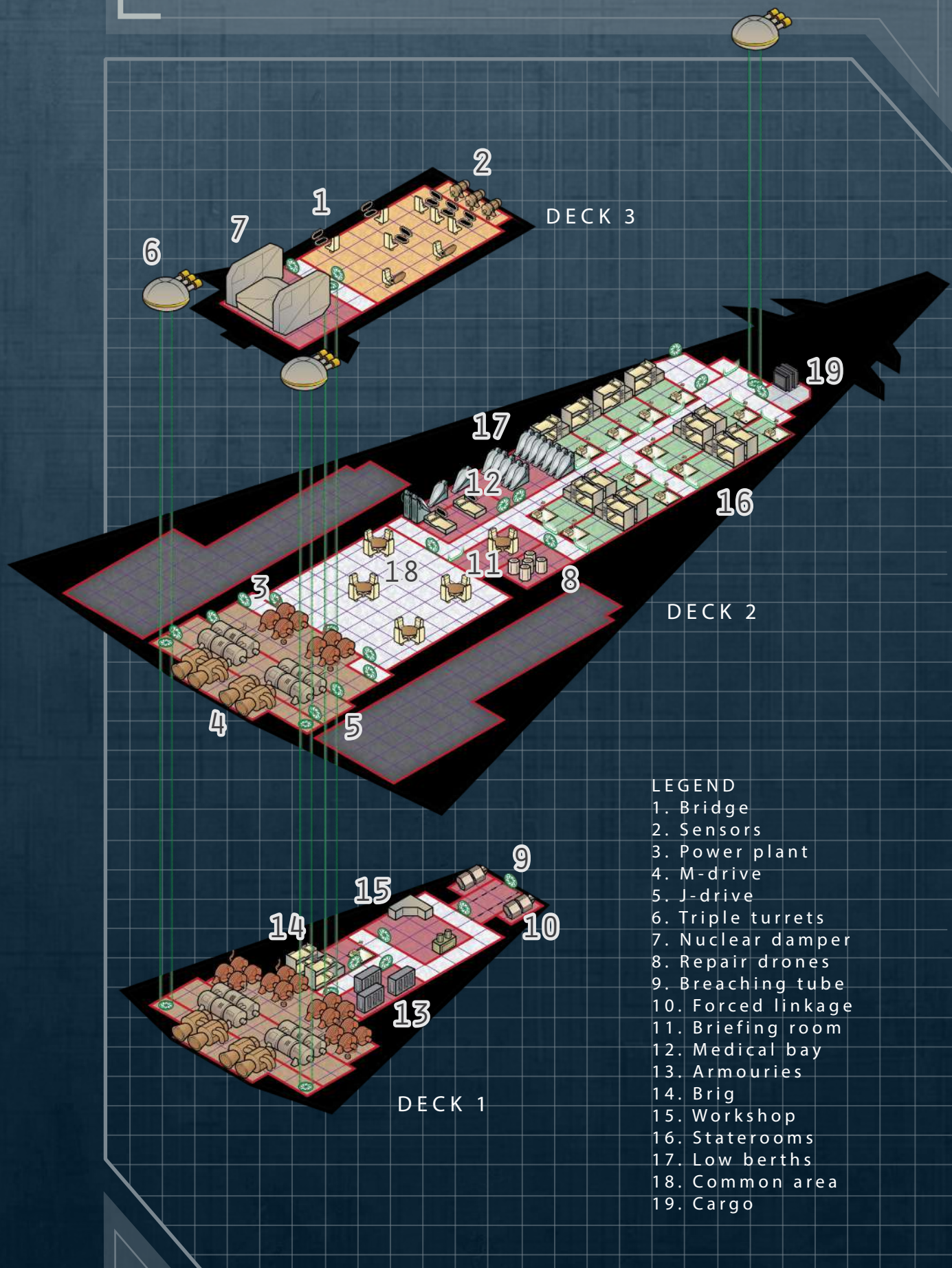
RUNNING COSTS

MAINTENANCE COST
Cr12877/month

PURCHASE COST
MCr154.525

POWER REQUIREMENTS

60	2
BASIC SHIP SYSTEMS	SENSORS
150	39
MANOEUVRE DRIVE	WEAPONS
60	4
JUMP DRIVE	SYSTEMS



BROADSWORD MERCENARY CRUISER

Although more properly in the corvette class, the Broadsword is traditionally referred to as a cruiser. This is not entirely inaccurate, as the vessel is equipped to undertake lengthy cruises without returning to port, which was the original defining characteristic of a cruiser. Vessels are built to TL12 standards, like many on the open market, to make them attractive to the widest range of operators. Indeed, the designers considered it important that repairs be possible using lower-tech components, at least in the short term. As a result many equipment spaces are larger than they need to be or have the capability to spill over into the areas normally used for less essential systems.

There are several very similar vessels built to the same general specification and appearance by different manufacturers. This is sometimes due to component availability or preferences, and sometimes slight modifications are made to the design in order to get around licensing regulations. The overall performance of one 800-ton mercenary cruiser is much like that of another but some designs have additional capabilities. This particular model has a nuclear damper, which is not considered necessary by some purchasers and eagerly demanded by others.

The Broadsword is built as a 'sphere on legs' and laid out in a manner more normally seen on much larger vessels. In spacer parlance it is a 'tail sitter' with the top of the sphere (relative to the ground when landed) containing command and control systems and engineering spaces at the bottom. Accommodation and cargo spaces are in between. The Broadsword carries two 50-ton cutters for interface work, housed in docking areas running through the hull from aft, alongside two of the landing legs. The other landing legs contain elevators.

When landed, cargo must be moved by way of elevators, which limits the size of containers that can be brought in or taken out. This is not much of a problem for most operators as they are unconcerned with efficiently manoeuvring standard shipping

containers and tend to break cargoes up for use. The cutters can disgorge cargo directly onto the stowage deck. This means a Broadsword will normally take on bulk items whilst in orbit, using the cutters.

Armament varies from one vessel to another. Broadwords are equipped as standard with eight triple turrets, which are configured as the user desires. Four of the turrets form a ring around the top of the ship, the other four near the top of the landing legs. If the vessel is pointing directly at a target, all turrets can engage simultaneously. If not, it is necessary to rotate in order to unmask some of the weapons.

A fully-equipped Broadsword will typically have five officers and 17 enlisted personnel plus troops. Specialist officers lead the flight, engineering and gunnery crews, all answering to the executive officer and ultimately the captain. All officers would normally have a cabin of their own.

Full combat crew is around 17 non-officers, depending on how many multiskilled personnel are considered desirable or are available. Three engineers are required plus their officer, with eight gunners and their commander. Cutters can be single-crewed but normally carry a pilot and technician, who serve as backup pilots and techs when aboard ship. Another couple of generalists are often carried who will usually be on galley duty when not providing shipside security, handling cargo and filling in wherever needed.

A Broadsword can accommodate 35 ground troops plus two leaders, who are normally assigned cabins whilst their troops live in the barracks. This is something of a squeeze but it is acceptable providing troops can get groundside on a frequent basis. There is an old adage about troops being so unwilling to crowd back inside their Broadsword that they will refuse to retreat despite tremendously bad odds.

BROADSWORD MERCENARY CRUISER

TL12

TON

COST (MCr)

Hull	800 tons, Sphere	—	32
Armour	Crystaliron, Armour: 4	40	6.4
M-Drive	Thrust 3	24	48
Jump Drive	Jump 3	65	97.5
Power Plant	Fusion (TL12), Power 750	50	50
Fuel Tanks	J-3, 4 weeks of operation, small craft fuel	250	—
Bridge	Holographic Controls	20	5
Computer	Computer/20fib	—	7.5
Sensors	Military Grade	2	4.1
Weapons	Triple Turrets x8	8	8
Screens	Nuclear Damper	10	10
Craft	Docking Spaces (50 tons) x2	110	27.5
Systems	Repair Drones	8	1.6
	Briefing Room	4	0.4
	Medical Bay	4	2
	Armouries x8	8	2
	Brig (capacity 6)	4	0.25
	Workshop	6	0.9
	UNREP System (40 tons/hour)	2	1
Staterooms	Standard x16	64	8
	Barracks x35	70	3.5
Common Areas		48	4.8
Software	Manoeuvre/0	—	—
	Jump Control/3	—	0.3
	Library	—	—
	Auto-Repair/2	—	10
	Fire Control/1	—	2
Cargo Space		3	—

TOTAL: MCr 332.75

CREW

CAPTAIN, PILOT, ASTROGATOR,
ENGINEERS X4, GUNNERS X9

RUNNING COSTS

MAINTENANCE COST
Cr27729/month

PURCHASE COST
MCr332.75

POWER REQUIREMENTS

160

BASIC SHIP
SYSTEMS

2

SENSORS

240

MANOEUVRE
DRIVE

28

WEAPONS

240

JUMP DRIVE

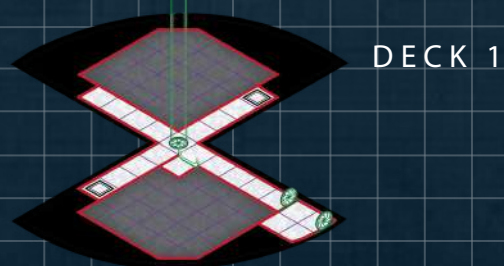
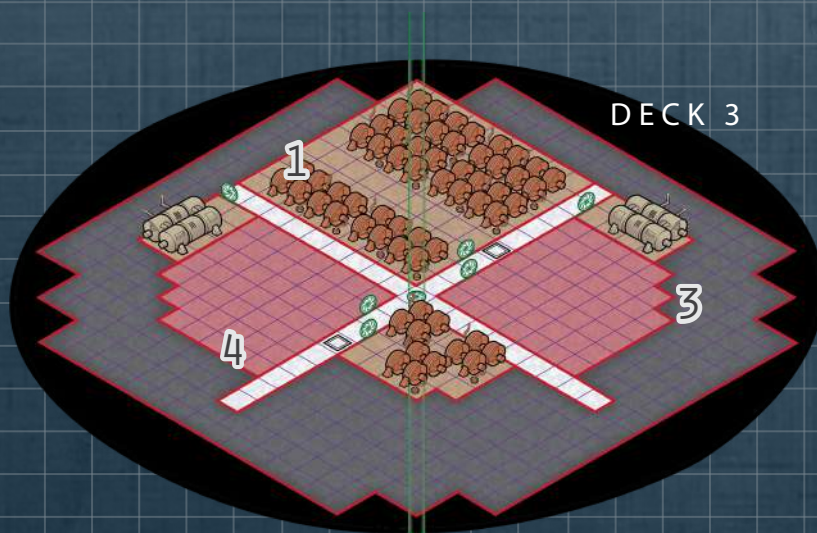
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SYSTEMS

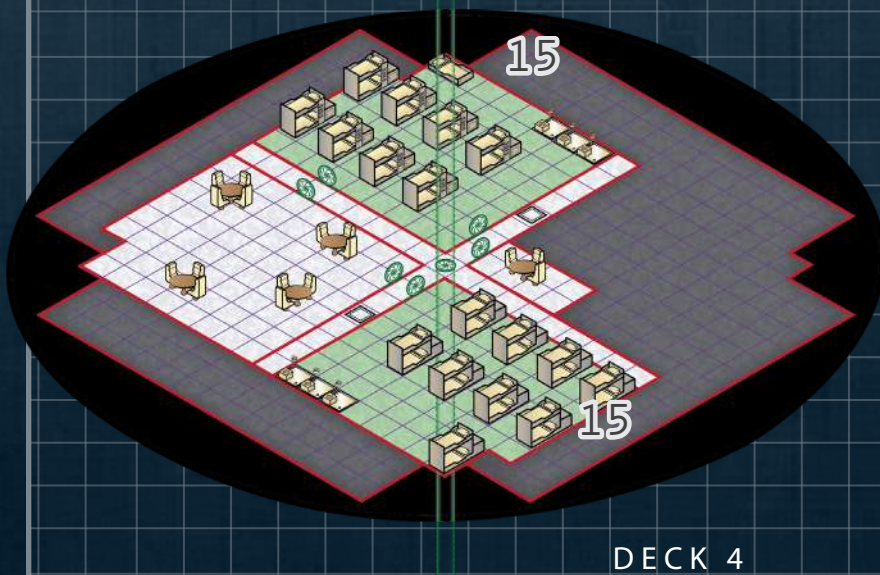
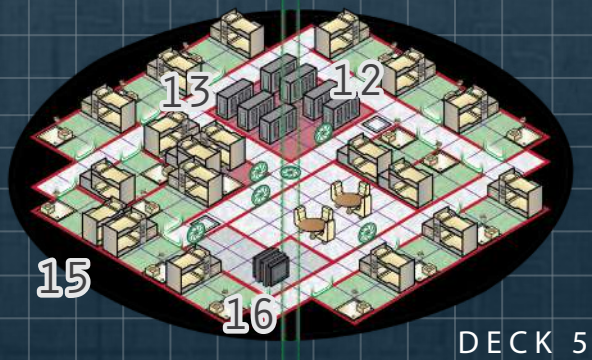
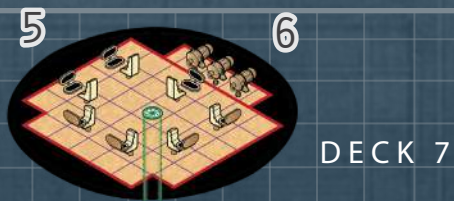


320

HULL POINTS



- LEGEND
- 1. Power plant
 - 2. M-drive
 - 3. J-drive
 - 4. Docking space



LEGEND

- 5. Bridge
- 6. Sensors
- 7. Triple turrets
- 8. Nuclear damper
- 9. Repair drones
- 10. Briefing room
- 11. Medical bay
- 12. Armouries
- 13. Brig
- 14. Workshop
- 15. Staterooms
- 16. Barracks
- 17. Cargo space

RANGER OPERATIONAL SUPPORT VESSEL

The Ranger is officially designated an operational support vessel as it was envisaged as a light transport with an organic small craft capability. However, enterprising users quickly repurposed it into a 'pocket carrier' capable of carrying out light escort and patrol-and-security deployments. The original version had a 300-ton cargo hold, which was converted into additional craft handling space and associated systems, including accommodation for additional crew.

Hull form is anything but attractive, consisting of four primary structures with a small command blister. The main hull is a blocky rectangle containing the drives and critical ship systems, with cylindrical fuel tanks along its sides. These are not quite separate structures but are separated from the main hull by a layer of the ship's notoriously thin armour. What was originally the cargo area is located under the main hull and connected to it by a sturdy gantry. This makes moving heavy equipment from one half of the ship to the other a little tricky but the fact that an explosion among badly stowed ordnance would be two layers of armour away from the drives appeals to some operators.

The bridge perches atop the main hull, about a third of the way aft, with 'officers' country' located forward and a second group of cabins aft of it on the main deck, below. Engineering spaces take up about a third of the main hull. The cargo area, which originally occupied most of the secondary hull, has been converted to support operations by a total of 150 tons of small craft. For vessels operating in an escort role most of this tonnage is given over to light fighters, although at least one launch or pinnacle is required for interface work. It is common to find Rangers carrying eight 10-ton fighters and two or three 20-ton launches but preferences vary.

Accommodation for the flight crew is adjacent to the hangars, with a fighter control room of sorts, a medical bay and various supporting facilities fitted in wherever space could be found. The ship's cargo capacity is nominally 50 tons but this space is often used for

additional modifications. Variant designs sometimes have less hangar space but more cargo, or include an operational command suite in this area. In this configuration the Ranger often acts as a task force flagship for small navies, providing command and control as well as light fighter protection.

As a military or paramilitary ship the Ranger was designed from the outset to mount significant armament. Most vessels retain their standard weapons fit, although there is sufficient power to convert some of the barbettes to energy weapons. Primary armament is a battery of four missile barbettes, located on the flanks of the secondary hull. Each has a small munitions bay for additional missiles, conveniently located for the weapons. Proximity to the cargo bay – in the original configuration – is cited as the reason for placing missiles there but some cynics point out that they are as far away from the bridge as they can be.

Secondary armament is two batteries of two triple pulse laser turrets, one located aft of the command blister and one opposite it on the ventral surface of the secondary hull. Munitions bays are associated with these turrets in case a user wants to convert them to additional missile or sandcaster mounts but these days are typically used for secure stowage or as locations for ship defence small arms. On the nose of the primary hull and at its aftmost point are two more turrets, conventionally configured with twin sandcasters and a pulse laser.

The Ranger cannot land on a planetary surface, so those who want to use it as a troop transport have to balance small craft capability with personnel accommodation requirements. Some or all of the hangar area can be converted to barracks or cargo space without undue difficulty but there are trade-offs to be made. One successful variant carries a complement of armed launches and a small ship's troops force plus a handful of fighters, creating a modest but effective patrol and system-security platform.

RANGER OPERATIONAL SUPPORT VESSEL

TL12		TON	COST (MCr)
Hull	1,000 tons, Close Structure	—	45
Armour	Crystaliron, Armour: 2	25	4.5
M-Drive	Thrust 2	20	40
Jump Drive	Jump 2	55	82.5
Power Plant	Fusion (TL12), Power 675	45	45
Fuel Tanks	J-2, 8 weeks of operation, small craft fuel	225	—
Bridge	Holographic Controls	40	6.25
Computer	Computer/20	—	5
Sensors	Military Grade	2	4.1
	Improved Signal Processing	1	4
Weapons	Missile Barbettes x4	20	16
	Dual Turrets (pulse laser) x4	4	10
	Triple Turrets (sandcasters x2, pulse laser) x2	2	5
Ammunition	Munitions Bay (1 ton) x10	10	0
Screens	Nuclear Damper	10	10
Craft	Hangar (150 tons)	300	60
Systems	Repair Drones	10	2
	Briefing Room	4	0.5
	Medical Bay	4	0.5
	Armouries x2	2	0.5
	Brig (capacity 6)	4	0.25
	Workshop	6	0.9
	UNREP System (40 tons/hour)	2	1
Staterooms	Standard x36	144	18
Common Areas		24	2.4
Software	Manoeuvre/0	—	—
	Jump Control/2	—	0.2
	Library	—	—
	Auto-Repair/2	—	10
	Fire Control/1	—	2
Cargo Space		41	—
TOTAL: MCr 375.6			

CREW

CAPTAIN, PILOT, ASTROGATOR,
ENGINEERS X4, MAINTENANCE,
GUNNERS X11, MEDIC, OFFICERS X2

RUNNING COSTS

MAINTENANCE COST
Cr31300/month

PURCHASE COST
MCr375.6

POWER REQUIREMENTS

200

BASIC SHIP
SYSTEMS

2

SENSORS

200

MANOEUVRE
DRIVE

46

WEAPONS

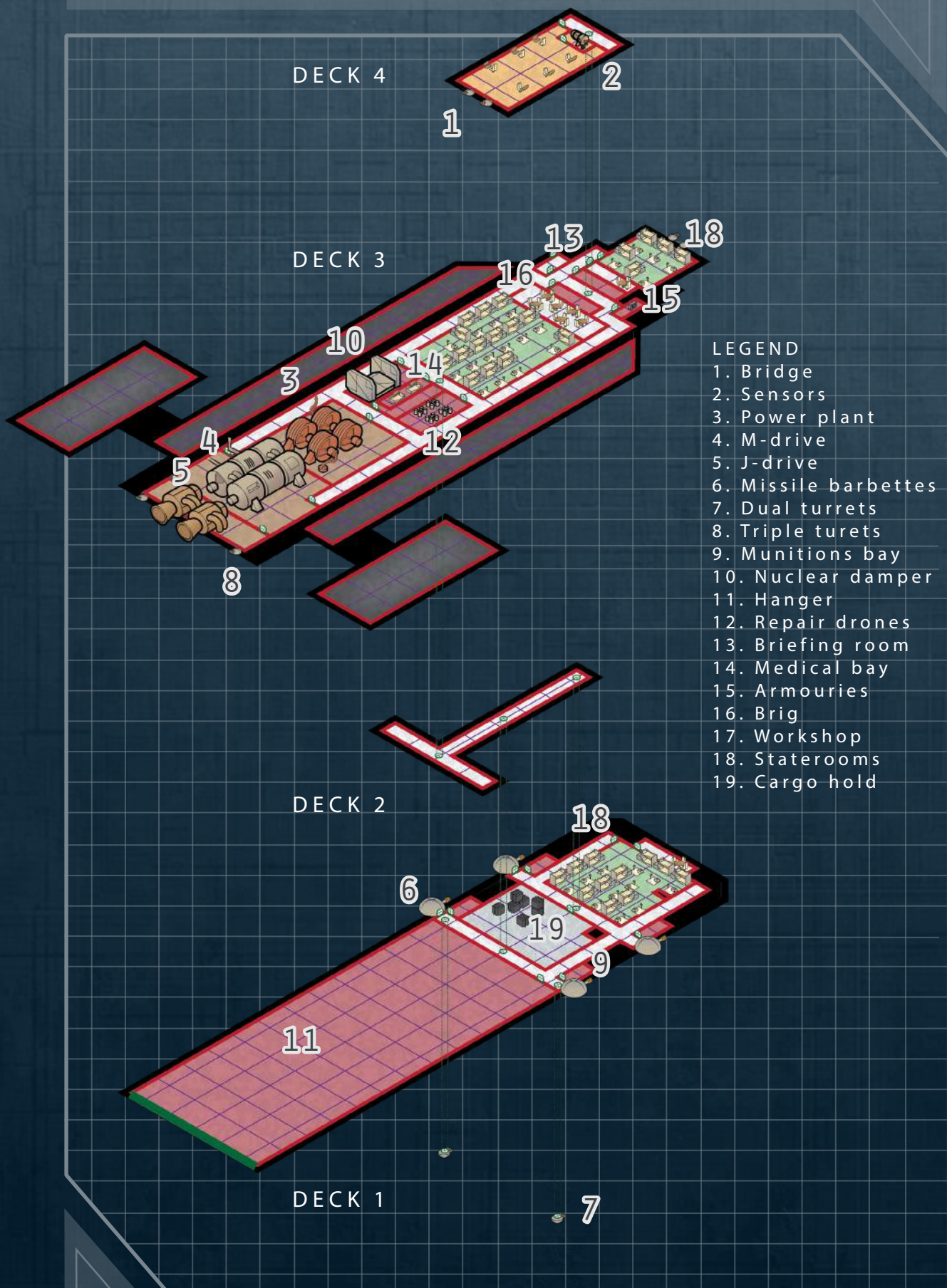
200

JUMP DRIVE

440

HULL POINTS





OURAGAN MERCENARY FRIGATE

The Ouragan and similar vessels are the largest likely to be encountered in the hands of a mercenary force. It is a true warship, albeit a light one, and has found favour with minor governments as a patrol and escort vessel. The Ouragan is not intended to take on major warships, even en masse, but can outfight many ships in its class. Most importantly, it is capable of running down and eliminating the sort of vessel typically used by pirates.

Hull form is conventional for the type, with a central primary hull and two 'operations pods' along the flanks. The bridge and gunnery control chamber are forward in the primary hull with accommodation midships and engineering spaces aft. The vessel's power plant is slightly oversized, allowing power-hungry systems to be swapped in as necessary. This is a useful feature as many variants of the Ouragan have been produced.

Each of the two operations pods houses a docking area capable of supporting 100 tons of small craft. Since the Ouragan is incapable of landing on a planetary surface some of this space must be allocated to utility craft but it is not uncommon to find a frigate carrying at least some fighters. These may be used to protect assault shuttles or conduct patrols if acting in a security/escort capacity.

The remainder of the two operations pods is largely taken up with accommodation for craft crews and ground troops. Barracks space for up to 50 personnel is provided in each, with cabins for flight

crew and leaders. There is also a medical bay and armouries, plus a small amount of cargo stowage. Vessels not intended to land ground troops may reduce the barracks space, retaining sufficient to accommodate a small number of marines or delete it entirely. In such cases the space freed up is sometimes used for additional small craft or converted to full hangars. A small weapons bay can be fitted in place of the barracks in each pod, although some of the ship's armament must be removed to accommodate it.

Primary armament as constructed consists of four particle accelerator barbettes, in two batteries of two. One battery is located on the forward dorsal surface, the other opposite it on the ventral surface. The dorsal, ventral and outer surfaces of the operations pods each mount a triple pulse laser turret, which can be fired individually or grouped as port and starboard batteries. Fore and aft on each operations pod are turrets mounting a mix of missiles and sandcasters, which can switch between defensive and offensive fire at need.

Ouragans are typically encountered in pure-warship form (with the ground troops barracks replaced by weapons bays) in vessels intended for a straight naval role. These have found favour both as escorts and raiders. Those built to their original design have slightly less fighting power in space combat but are more than a match for the typical corsair and often encountered in the hands of pirate-hunters.



660

HULL POINTS

OURAGAN MERCENARY FRIGATE

TL12		TON	COST (MCr)
Hull	1,500 tons, Close Structure	—	67.5
Armour	Crystaliron, Armour: 6	75	20.25
M-Drive	Thrust 6	90	180
Jump Drive	Jump 2	80	120
Power Plant	Fusion (TL12), Power 1,500	100	100
Fuel Tanks	J-2, 8 weeks of operation	320	—
Bridge	Holographic Controls	40	9.375
Computer	Core/50	—	60
Sensors	Military Grade	2	4.1
Weapons	Particle Barbettes x 4	20	32
	Triple Turrets (pulse lasers) x6	6	24
	Triple Turrets (missile racks x2, sandcaster) x4	4	11
	Point Defence Battery (Type II)	20	10
Screens	Nuclear Dampers x2	20	20
Craft	Docking Spaces (50 tons) x4	220	55
Systems	Repair Drones	15	3
	Briefing Rooms x4	16	2
	Medical Bays x2	8	4
	Armouries x24	32	6
	Brig (capacity 12)	8	0.5
	Workshop	6	0.9
	UNREP System (40 tons/hour)	2	1
Staterooms	Standard x24	96	12
	Barracks x100	200	5
Common Areas		100	10
Software	Manoeuvre/0	—	—
	Jump Control/2	—	0.2
	Library	—	—
	Auto-Repair/2	—	10
	Electronic Warfare/1	—	15
	Fire Control/1	—	2
Cargo Space		20	—
TOTAL: MCr 784.825			

CREW

CAPTAIN, PILOT, ASTROGATOR,
ENGINEERS X4, GUNNERS X9

RUNNING COSTS

MAINTENANCE COST
Cr65402/month

PURCHASE COST
MCr784.825

POWER REQUIREMENTS

300

BASIC SHIP
SYSTEMS

2

SENSORS

600

MANOEUVRE
DRIVE

202

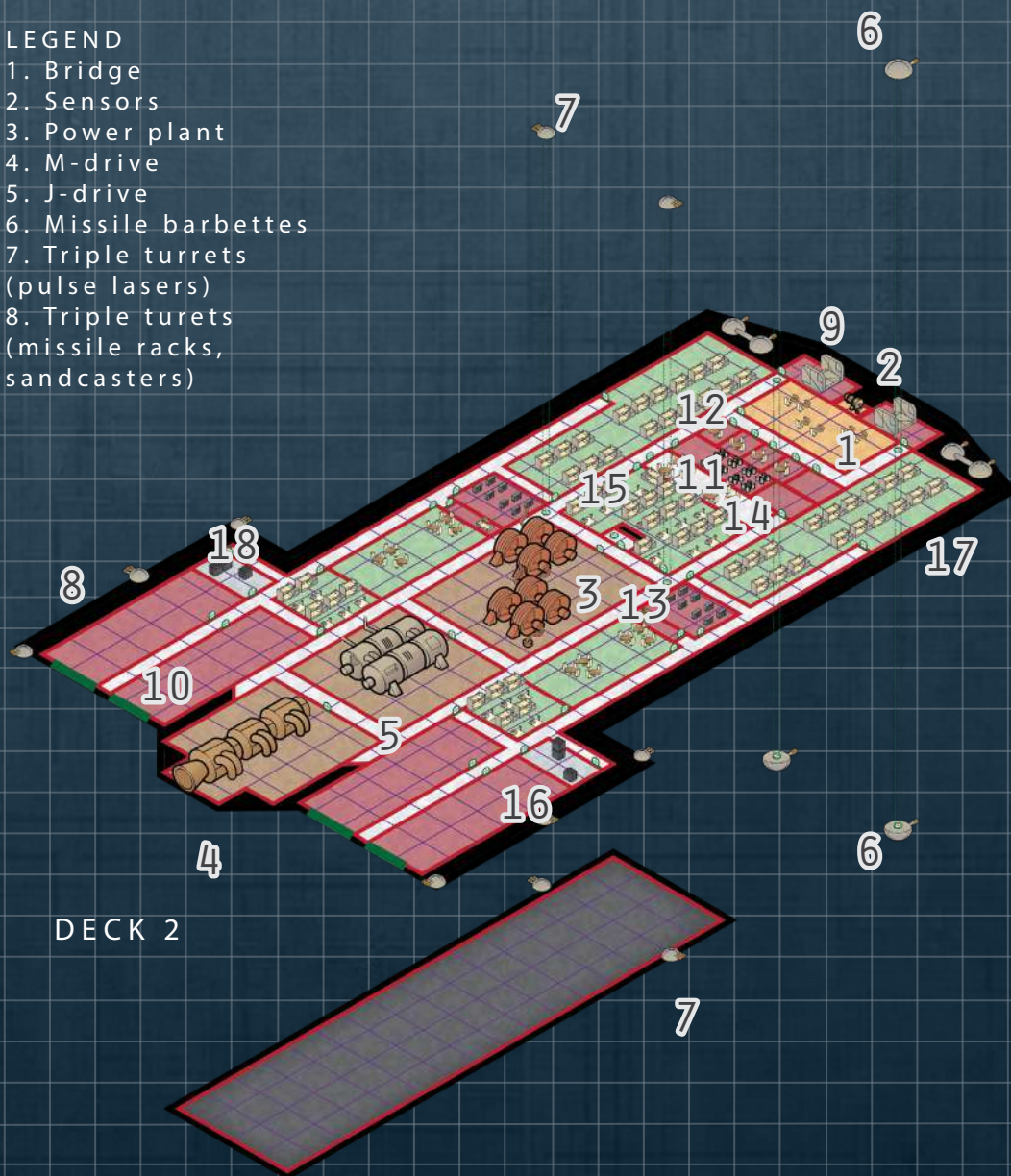
WEAPONS

300

JUMP DRIVE

LEGEND

1. Bridge
2. Sensors
3. Power plant
4. M-drive
5. J-drive
6. Missile barbettes
7. Triple turrets (pulse lasers)
8. Triple turrets (missile racks, sandcasters)



DECK 2

DECK 1

9. Nuclear damper
10. Docking space
11. Repair drones
12. Briefing room
13. Medical bay
14. Brig
15. Stateroom
16. UNREP system
17. Barracks
18. Cargo hold

1 Square = 5 Tons